

# JVC

## SERVICE MANUAL

### LCCS VIDEO MONITOR

BASIC CHASSIS

Q1B1

# TM-L500PN



## CONTENTS

■ SPECIFICATIONS .....	2
★ OPERATING INSTRUCTIONS (APPENDED) .....	1-1
■ SAFETY PRECAUTIONS .....	3
■ SPECIFIC SERVICE INSTRUCTIONS .....	4
■ SERVICE ADJUSTMENTS .....	9
★ STANDARD CIRCUIT DIAGRAM (APPENDED) .....	2-1
■ PARTS LIST .....	13

# SPECIFICATIONS

## Basic Specifications

Type	LCCS Video Monitor
Power Input	AC100V~240V 50/60Hz
Power Consumption	DC 19V:2A (AC Adapter) DC 12V:3.5A (Battery)
Speaker	5cm Round Type 0.2W
Scanning Frequency	H :15.734KHz(NTSC) :15.625KHz(PAL) V :60Hz(NTSC) :50Hz(PAL)
Horizontal Resolution	400 lines
Colour System	NTSC/PAL
Picture Tube	5" measured diagonally, black and white (Colour Filter and Liquid crystal Shutter)
Dimensions(W × H × D)	146mm x 181.3mm x 291.8 mm
Length of Power Cord	1.8m
High Voltage	12KV
Focus Voltage	660V
Screen Voltage	41.3V

## Input and Output Terminal

VIDEO A	BNC Connector × 2(Input, Output)
VIDEO B	BNC Connector × 2(Input, Output)
AUDIO IN	RCA PIN × 2(A,B)

## Others

Remote in	3.5mm stereo min jack × 1
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# SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by ( $\Delta$ ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**  
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( $\perp$ ) side GND, the ISOLATED(NEUTRAL) : ( $\downarrow$ ) side GND and EARTH : ( $\oplus$ ) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.  
If above note will not be kept, a fuse or any parts will be broken.
5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k $\Omega$  2W resistor to the anode button.
8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

## 9. Isolation Check

### (Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

### (1) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second.

(. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

This method of test requires a test equipment not generally found in the service trade.

### (2) Leakage Current Check

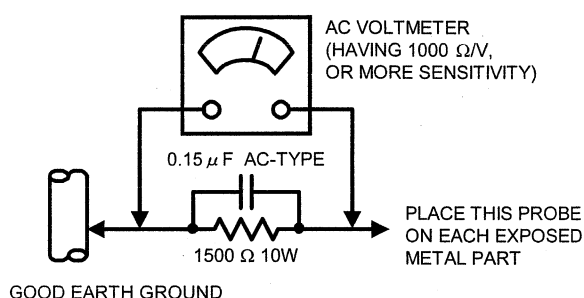
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

#### ● Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



# SPECIFIC SERVICE INSTRUCTION

## DISASSEMBLY PROCEDURE

### AC adapter

1. Take out 4 screws and remove the AC adapter.

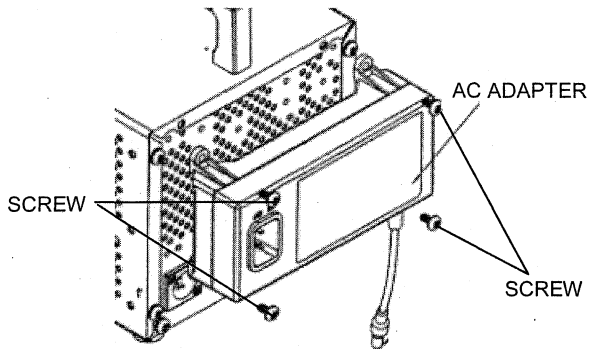


Fig1

### Handle

1. Take out 2 screws and remove the handle.

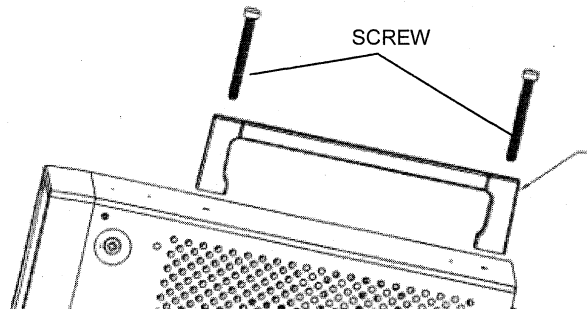


Fig2

### External cover

1. Remove the AC adapter.
2. Take out 8 screws A (see Figs. 3 and 4).
3. Grasp the handle and shift the cover slightly rearward. Gently spread the sides of the cover outward (Fig. 5) and raise the cover upward to remove it.

### Remark

Set the cover as shown in Fig. 6. Gently press the lower parts of the cover sides inward and press the cover forward.

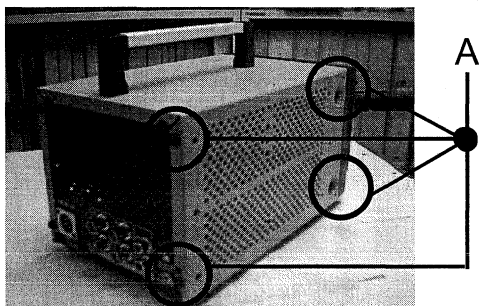


Fig.3

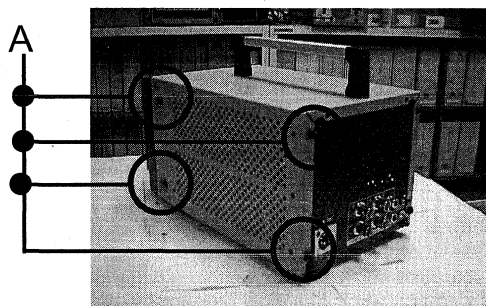


Fig.4

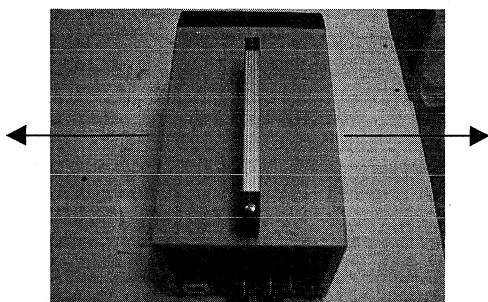


Fig.5

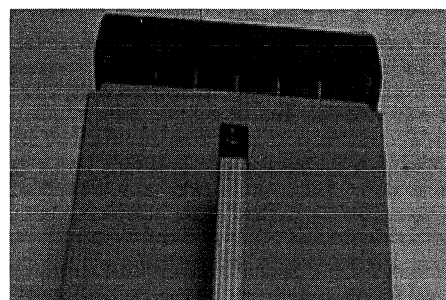


Fig.6



### Speaker case assembly

1. Remove the external cover.
2. Take out 4 screws (note 2 types) and remove the speaker case assembly.

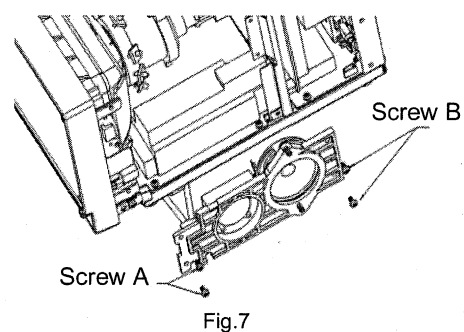


Fig.7

### CRT unit

1. Remove the speaker case assembly.
2. Take out 2 screws B.
3. Raise the CRT module upward and shift it forward to remove.

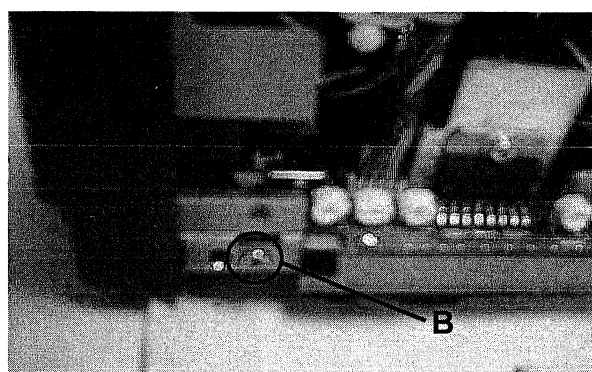


Fig.8

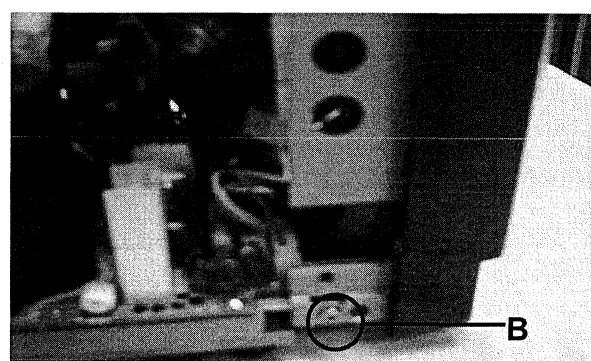


Fig.9

### Rear cover (terminal board)

1. Remove the external cover.
2. Take out 2 large size screws, 3 medium size screws, and the Remote In washer. Removing the 2 small size screws is not necessary.

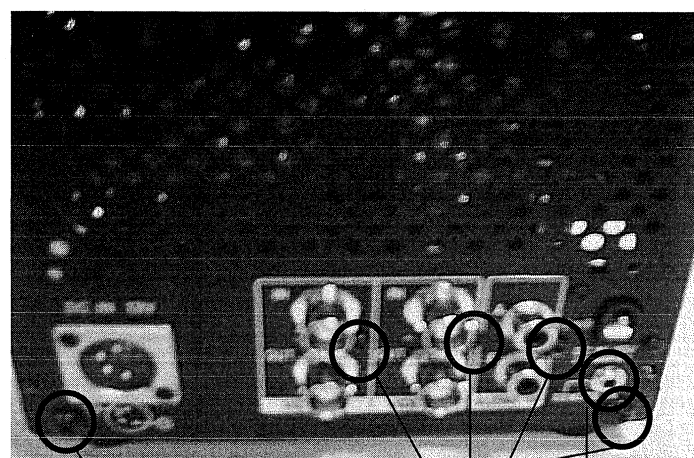


Fig.10

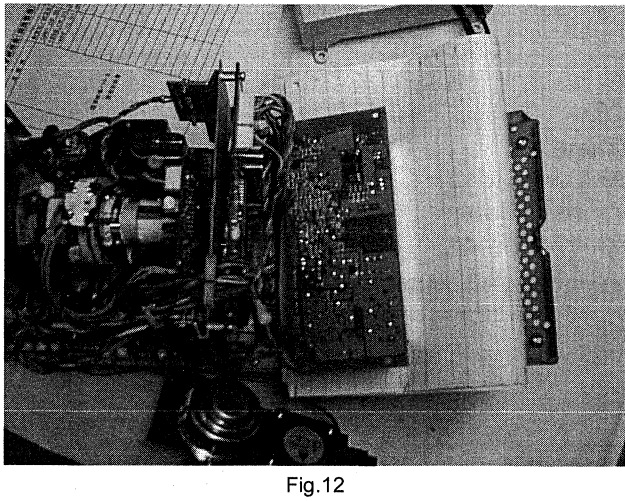
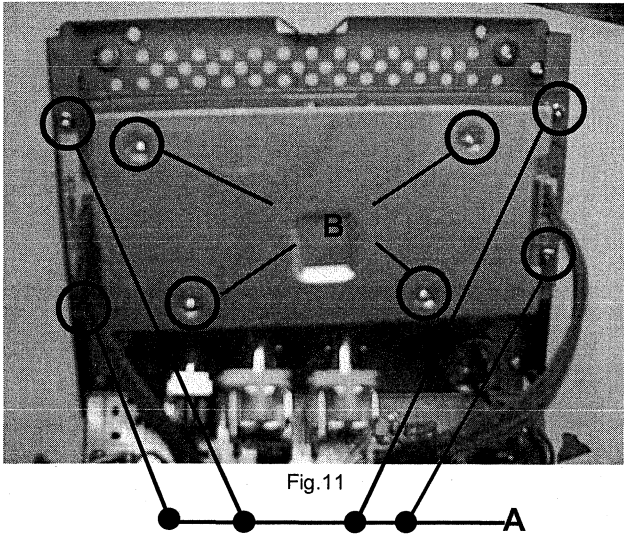
Large size  
screw

Middle size  
screw

Small size  
screw

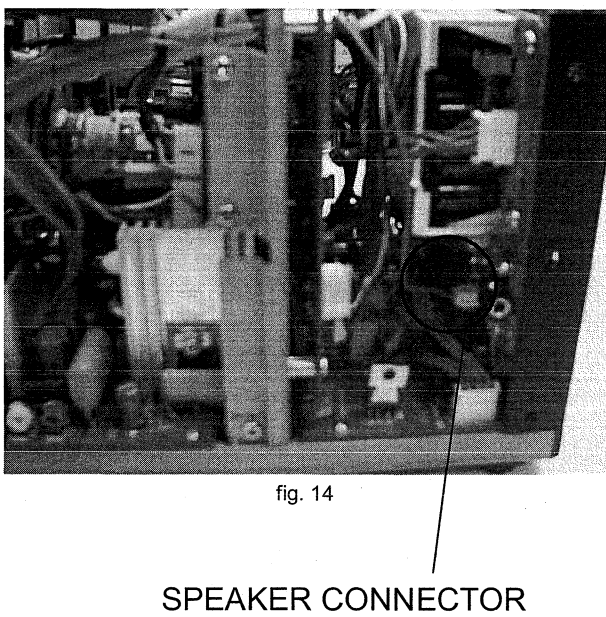
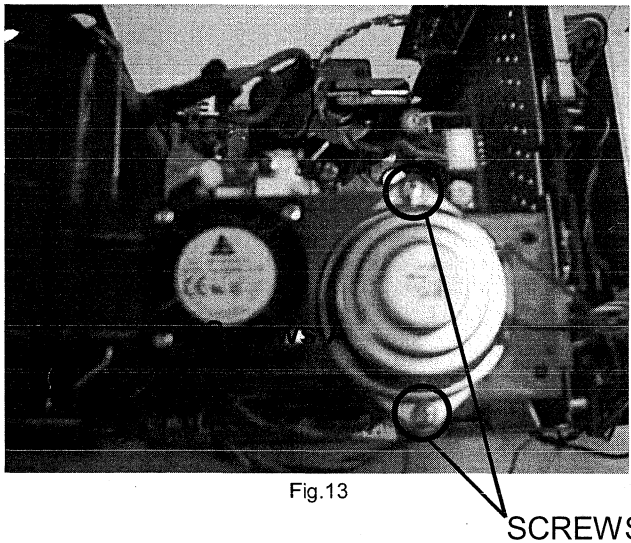
DC-DC converter

- 1. Remove the external cover.
- 2. Remove the rear cover.
- 3. Take out 4 screws A (Fig. 11).
- 4. Inspect as indicated in Fig. 12.  
(Remark)Insert paper to avoid shorting.
- 5. When replacing DC-DC converter parts, take out 4 screws B.



<REMARKS>

Main chassis inspection is described on the following pages.  
Before proceeding, take out 2 speaker screws, remove the wire connecting the video process board and remove the speaker. This is recommended in order to avoid that the wire is removed from the speaker.



### Main chassis inspection

1. Remove the AC adapter.
2. Remove the external cover.
3. Remove the speaker case assembly.
4. Remove the CRT unit.
5. Remove the rear cover (terminal board).
6. Take out 4 screws of the interface board and 4 screws of the main board.  
(The interface and main board locations are shown in Fig. 15.)
7. Take out 2 screws A of the middle bracket assembly (see Figs. 16 and 17).
8. Inspect as indicated in Fig. 18.
9. Insert paper as shown in Fig. 19 to avoid shorting.

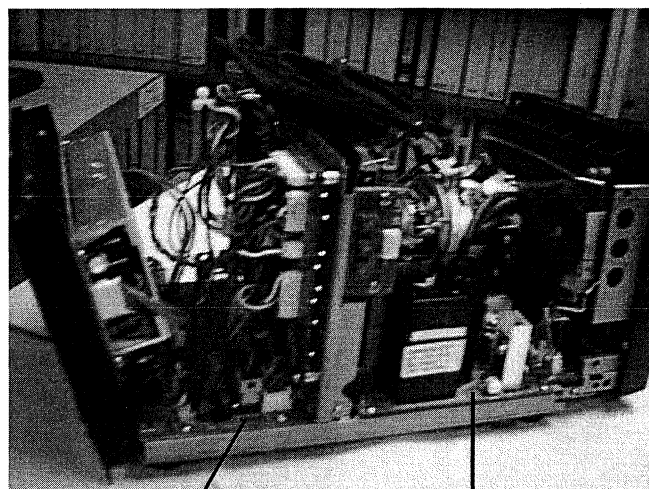


Fig.15  
Interface PCB      Main PCB

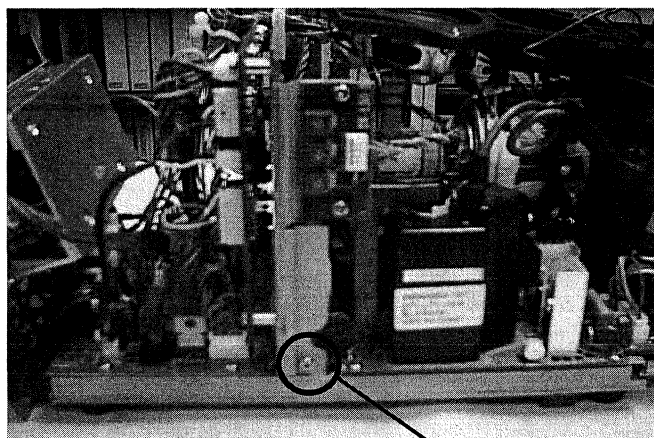


Fig.16  
A

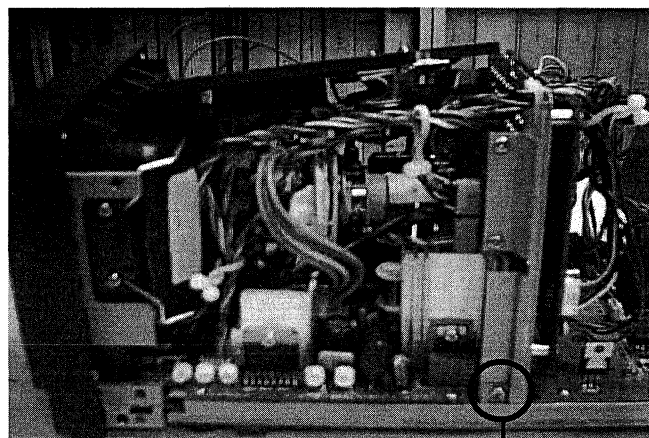


Fig.17  
A



Fig.18

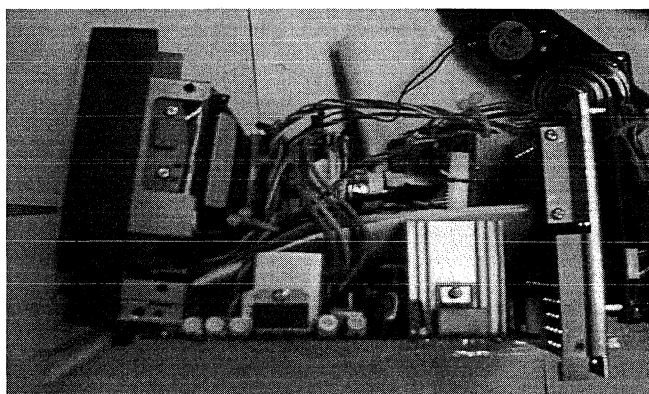


Fig.19

### CRT socket PCB inspection

1. Remove the main chassis (see main chassis inspection).
2. Inspect as indicated in Fig. 20. (Insert paper to avoid shorting.)

### Video processor PCB inspection

1. Remove the main chassis (see main chassis inspection).
2. Take out 4 screws of the video processor PCB (Fig. 21).
3. Inspect as indicated in Fig. 22.  
(Insert paper to avoid shorting.)

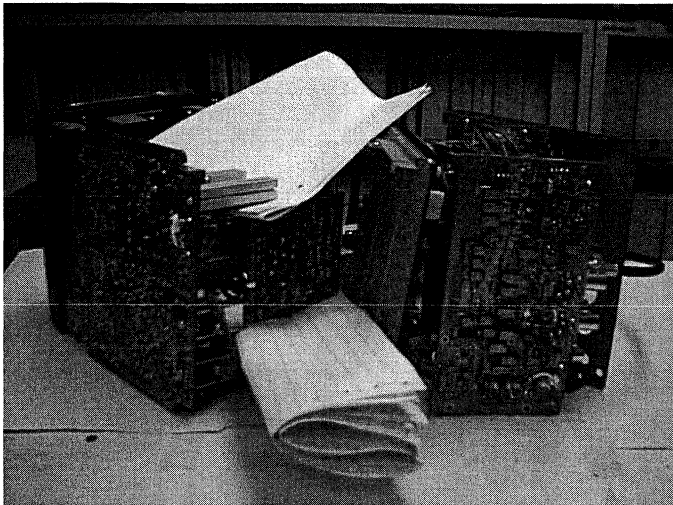


Fig.20

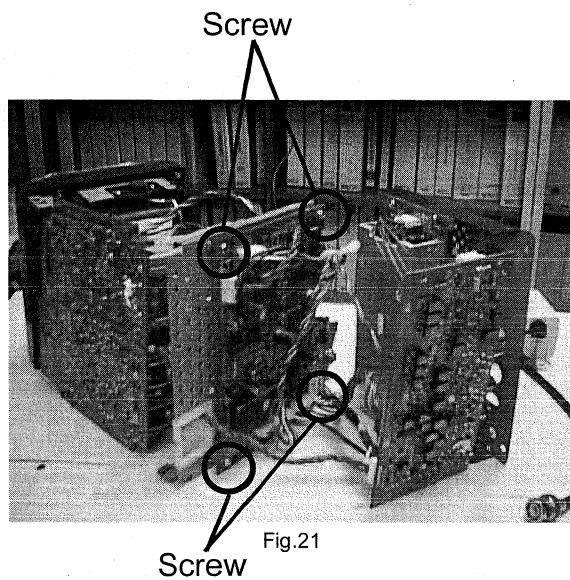


Fig.21



Fig.22

# Adjustment

## Before starting Service Adjustment

1. Before starting adjustment, supply power and allow the set and test equipment to warmup at least 20 minutes.
2. Check for correct AC power source.
3. Use care not to disturb internal controls not specifically mentioned in the adjustment.

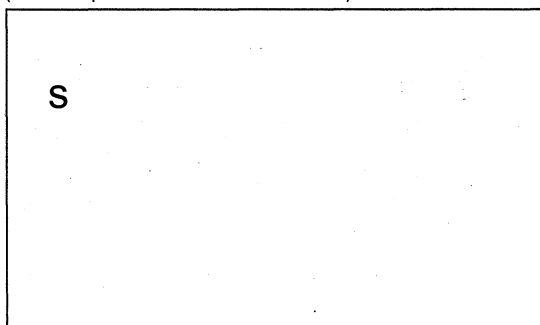
## Measuring Instrument and Fixtures

1. DC voltmeter (digital voltmeter)
2. Frequency counter
3. Oscilloscope
4. Pattern generator (408 NPS Leader)

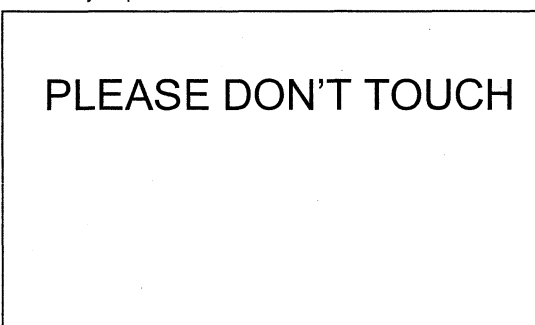
## Adjust mode

### 1.How to enter

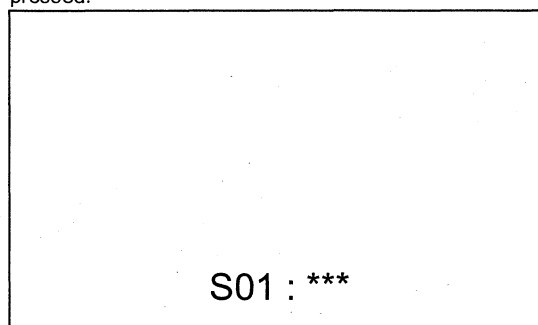
- (1) Supply a signal to Video B.
- (2) Simultaneously press the Video B and Menu buttons.
- (3) The letter S appears on the screen (Video B picture and sound selected).



- (4) While S is displayed, simultaneously press the Video B and Size Select buttons.
- (5) While Please Don't Touch appears on the screen, press the Menu key to produce the service mode.



- (6) The selected service item changes each time the Menu key is pressed.



- (7) Adjust the service item by pressing the Volume + and - keys.

### 2.Adjustment items

Item Number	Item	Standard Setting Value	Variable range
S01	Contrast	64	4~124
S02	Brightness	62	4~124
S03	Sharpness	94	4~124
S04	CHROMA(NTSC)	62	4~124
S05	CHROMA(PAL)	44	4~124
S06	PHASE	48	4~124
C01	TV/CATV	00	00:TV 01:CATV
C02	US CATV MODE	00	00:STD 01:HRC 02:IRC

#### Note

The S05 data do not change unless a PAL signal is applied to Video B.

If a PAL signal is applied to Video B, the S04 data do not change. In absence of a signal, if S04 is changed, S05 cannot be changed.

### 3.How to exit service mode

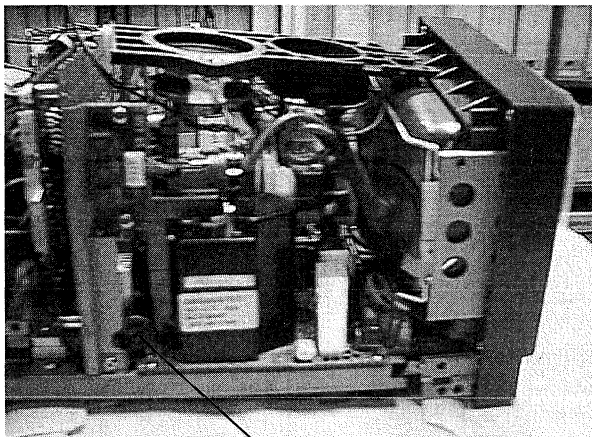
Press the Blue Check button or switch power off to release the service mode.



## VR adjustments

### 1.FOCUS ADJUSTMENT

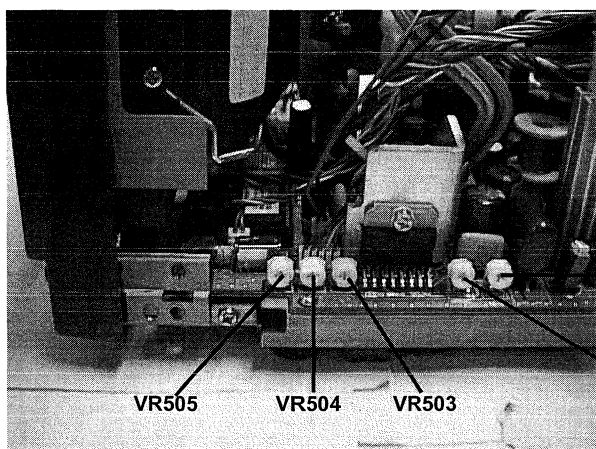
- (1) Receive a crosshatch signal.
- (2) Allow a minimum of 2 minutes warmup before adjusting.
- (3) Set Brightness to standard position (0) and Contrast to maximum (30).
- (4) Adjust the Focus VR for best setting.



FOCUS VR

### 2.Vertical amplitude

- (1) Receive a PAL crosshatch signal.
- (2) Press the Size Select button and select 16:9.
- (3) Adjust VR501 to set the vertical amplitude to 48 mm.
- (4) Press Size Select and select overscan.
- (5) Adjust VR504 to set the top of the screen between the first and second lines.
- (6) Press Size Select and select underscan.
- (7) Adjust VR503 to set the vertical amplitude to 64 mm.
- (8) Change to an NTSC crosshatch signal.
- (9) Press the Size Select button and select 16:9.
- (10) Adjust VR505 to set the vertical amplitude to 48 mm.



VR505

VR504

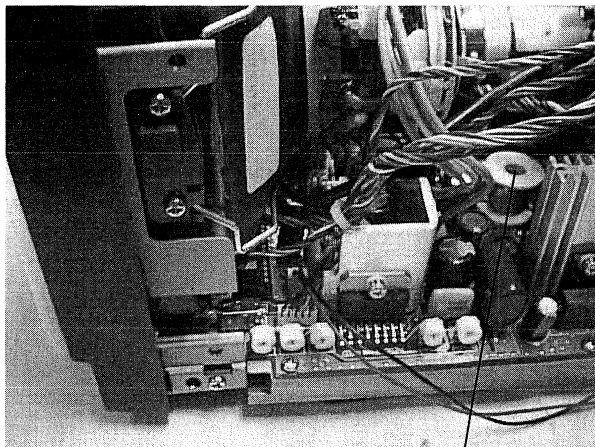
VR503

VR501

VR502

### 3.Horizontal amplitude

- (1) Receive a crosshatch signal.
- (2) Adjust L401 for natural horizontal amplitude.



L401

### 4.Horizontal position

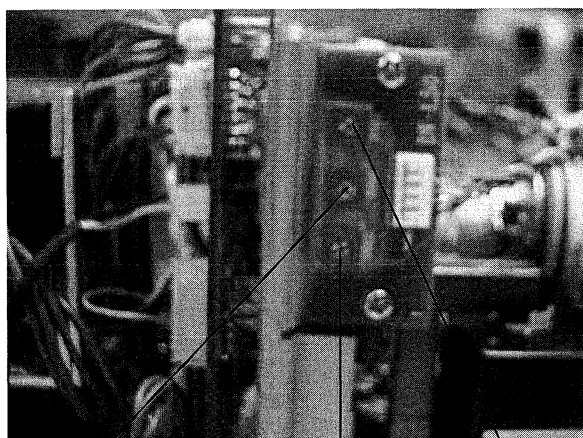
- (1) Receive a crosshatch signal.
- (2) Adjust VR401 for natural horizontal position.



VR401

### 5.RGB drive

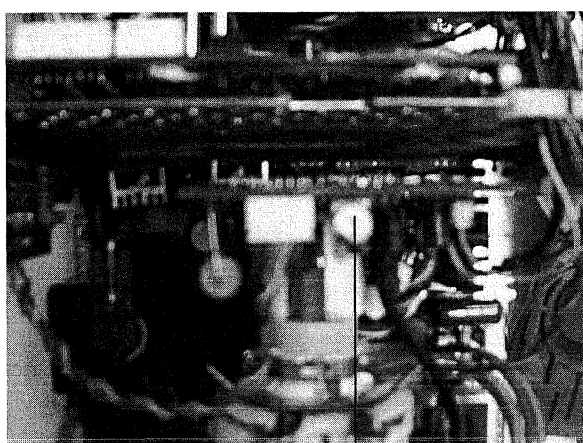
- (1) Receive an all white signal.
- (2) Set VR602, VR603 and VR604 to center.
- (3) Set VR604 to 1/3 position.
- (4) Adjust white balance with VR602 and VR603.
- (5) Lastly, adjust sub-contrast with VR601 of the CRT socket board.



VR604

VR602

VR603



VR601

### 6.Sub-bright

- (1) Supply an SMPTE color pattern input.
- (2) Adjust VR404 (directly below CRT neck) to where the black level pattern begins to appear at the lower right of the screen.

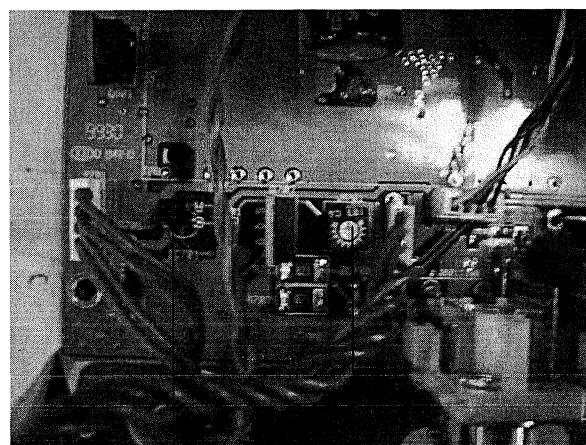


VR404

STICK

### 7. Battery Check

- (1) Connect 12V battery to the DC 12V terminal
- (2) Adjust VR701 to IC701 on the Interface PWB to  $6 \pm 0.05V$



IC701

VR701





# PARTS LIST

## CAUTION

- The parts identified by the  $\triangle$  symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied .
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied .

## ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
$\pm 1\%$	$\pm 2\%$	$\pm 5\%$	$\pm 10\%$	$\pm 20\%$	$\pm 30\%$	+30% -10%	+50% -10%	+80% -20%	+100% 0%

## CONTENTS

■ USING P.W. BOARD .....	14
■ EXPLODED VIEW PARTS LIST .....	15
■ EXPLODED VIEW .....	16
■ PRINTED WIRING BOARD PARTS LIST	
● INTERFACE PW BOARD ASS'Y (D-5600091003) .....	20
● KEY-VR [ DRIVE VR ] PW BOARD ASS'Y (D-5600091004) .....	23
● KEY-VR [ FRONT KEY ] PW BOARD ASS'Y (D-5600092001) .....	23
● EARPHONE PW BOARD ASS'Y (D-5600091007) .....	24
● CRT SOCKET PW BOARD ASS'Y (D-5600097001) .....	24
● VIDEO PROCESSOR PW BOARD ASS'Y (D-5600099001) .....	25
● MAIN PW BOARD ASS'Y (D-5600098001) .....	31
■ PACKING .....	35
■ PACKING PARTS LIST .....	35

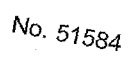
## USING P.W. BOARD

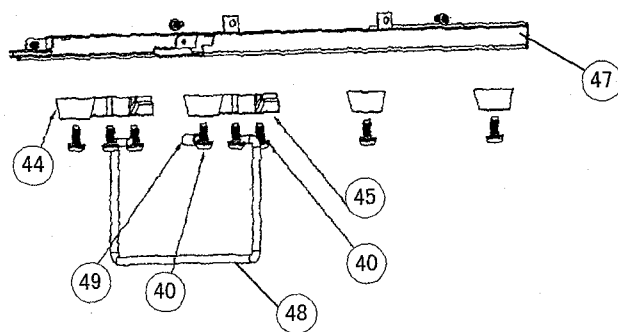
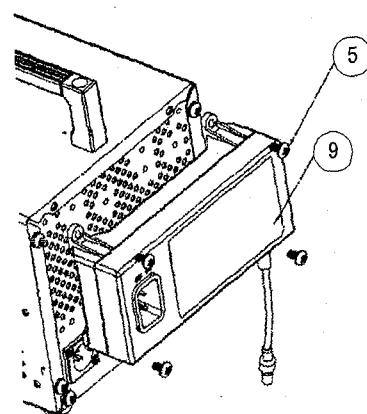
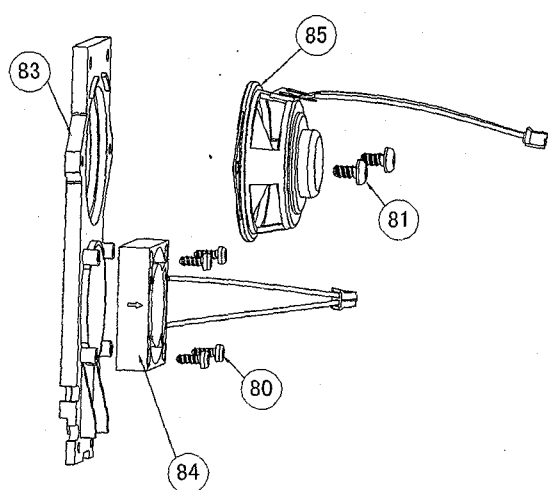
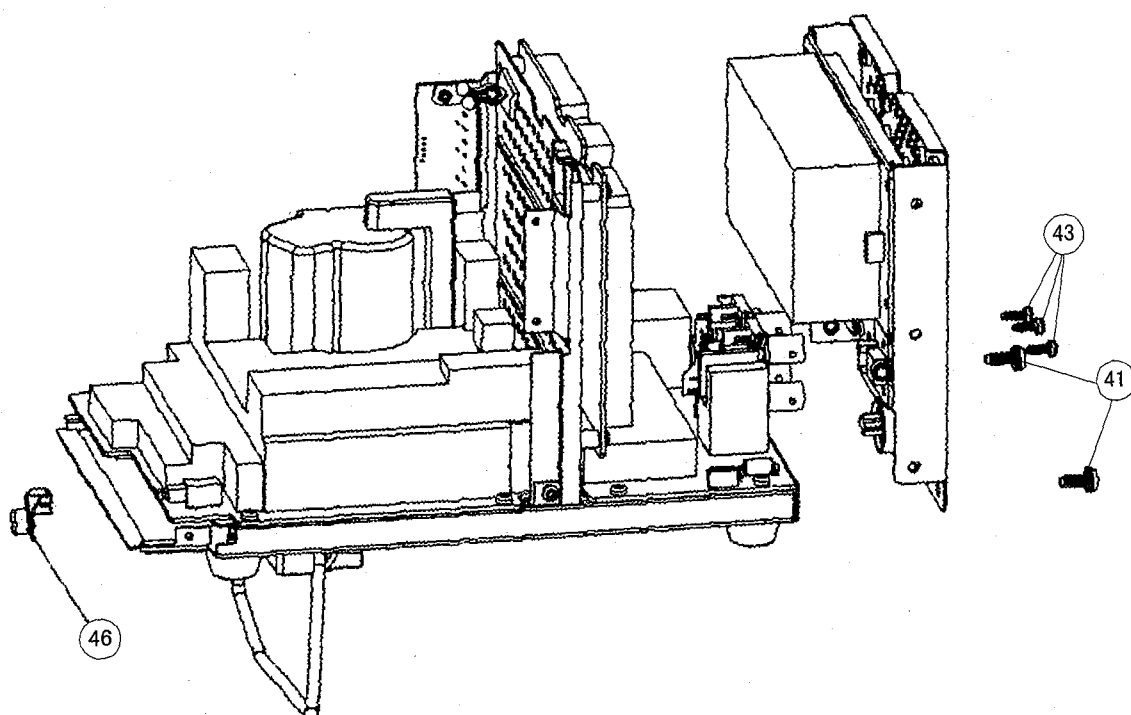
P.W.B ASS'Y	Model
INTERFACE P.W.B	TM-L500PN D-5600091003
KEY-VR [ DRIVE VR ] P.W.B	D-5600091004
KEY-VR [ FRONT KEY ] P.W.B	D-5600092001
EARPHONE P.W.B	D-5600091007
CRT SOCKET P.W.B	D-5600097001
VIDEO PROCESSOR P.W.B	D-5600099001
MAIN P.W.B	D-5600098001

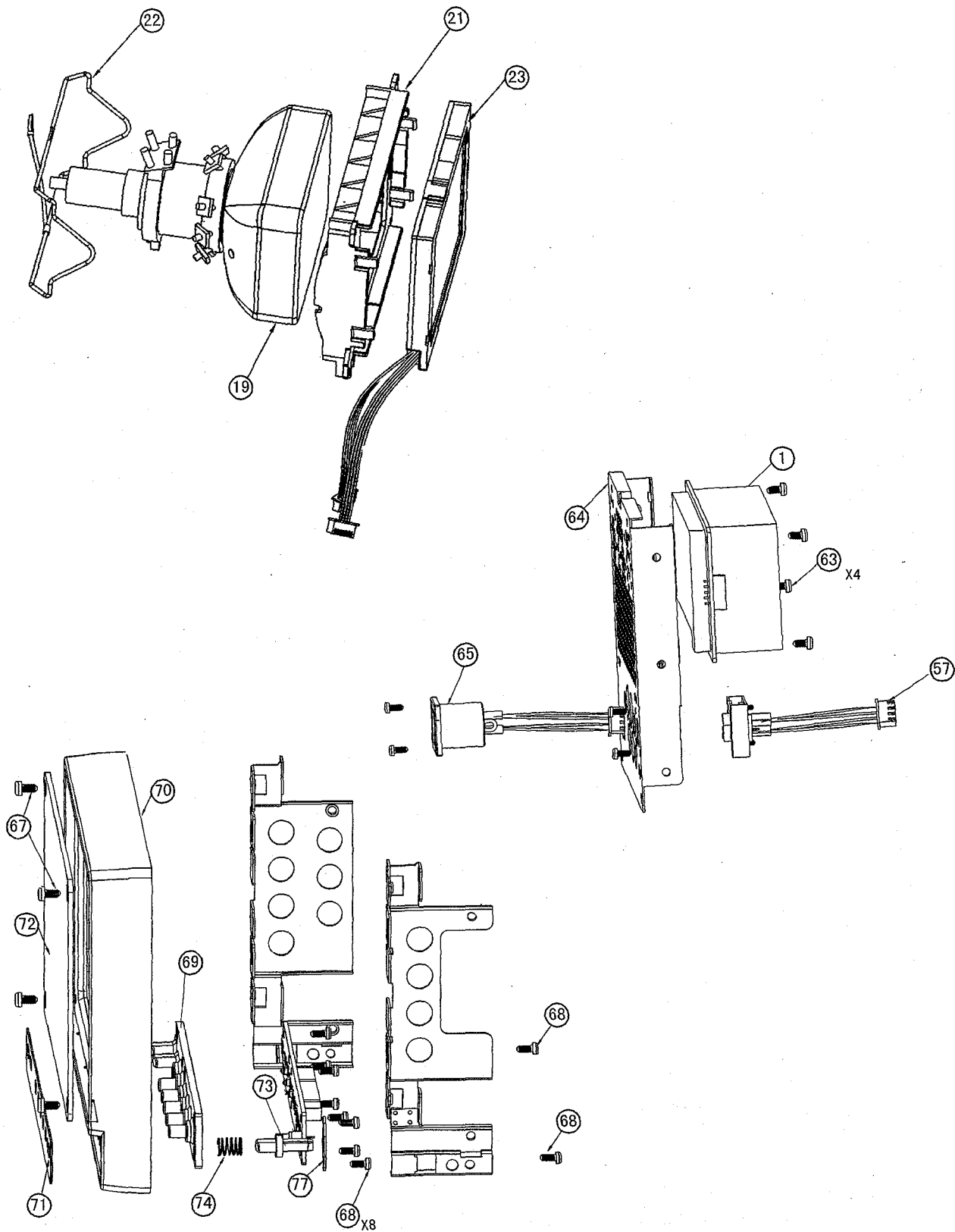
## EXPLODED VIEW PARTS LIST

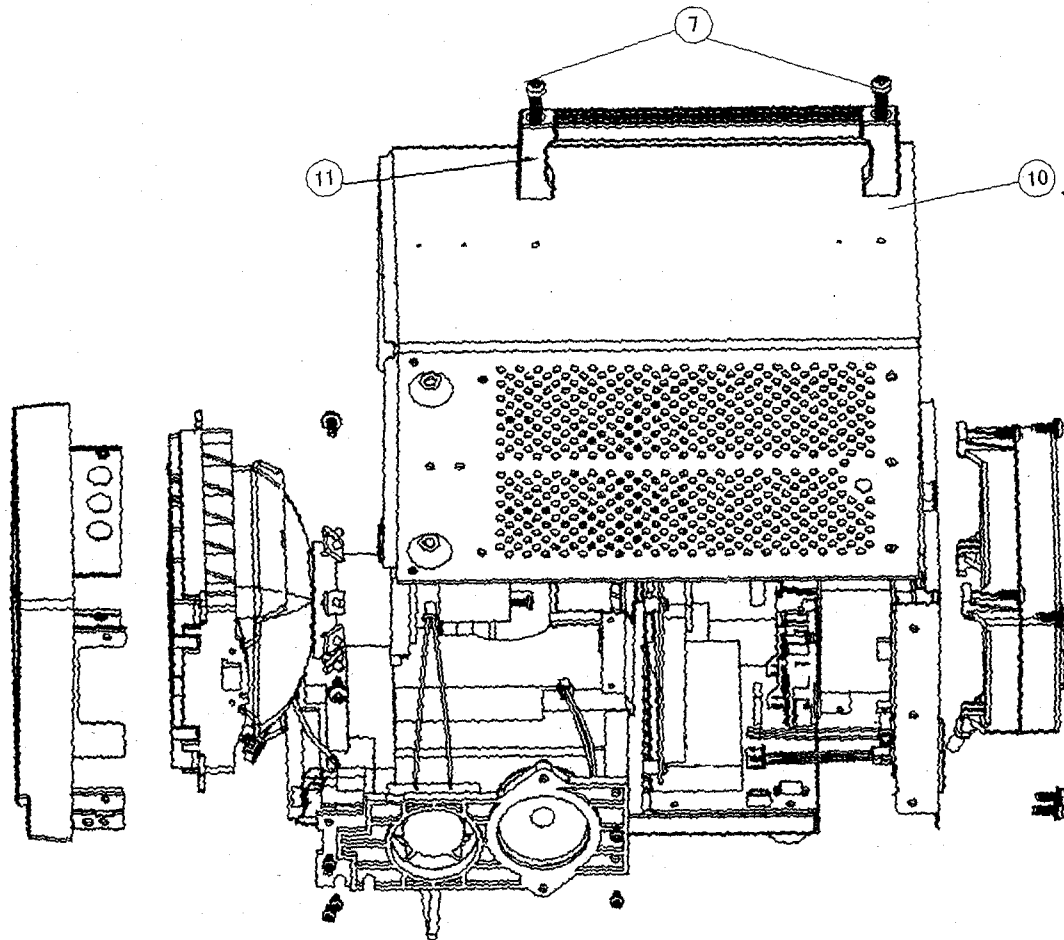
△	REF NO.	PART NO.	PART NAME	DESCRIPTION	
△	1	D-2636206300	DC-DC CONVERTER 30V 3.42A		
	5	D-3102430800	SCREW MACHINE M*4*0.7*8	FOR AC ADAPTER&REAR COVER	X4
	6	D-3102731000	SCREW M4*0.7*10 WITH LOOK WASH	FOR TOP COVER&REAR COVER/BACKET L/R	X8
	7	D-3105161300	SCREW MACHINE M5*0.8*45(NI)	FOR HANDLE	X2
△	9	D-3360147500	AC ADAPTER 19V 50W L=141 W=62		
	10	D-3371002501	CASE TOP COVER SECC T=0.8 L=22		
	11	D-3422100500	HANDLE AL L=166mm	ASMITH NO:E-40150	
	19	D-5600091010	CRT(I.T.C)	Inc.DY	
△	21	D-3360147100	FRAME CRT PC+ABS UL94V-0		
	22	D-3730169000	CRT CLIP ASSY		
	23	D-3797000102	LCCS PANEL 5" HS		
	40	D-3102450800	SCREW M4*8 NI PLATED		X4
	41	D-3102731000	SCREW M4*0.7*10 WITH LOOK WASH		X2
	43	D-3106170400	SCREW TAP $\phi$ 3*8 ZINC BLACK ANOZ		X3
	44	D-3240907900	FOOT EVA BLACK		X4
	45	D-3360154300	STAND FOOT PC+ABS UL94V-0		X2
	46	D-3360154501	SWITCH CONNECTOR DV-L50T/L45TN		
	47	D-3371002601	BOTTOM CASE		
	48	D-3421078500	STAND STAINLESS $\phi$ 4.0 L-130		
	49	D-3520805500	PVC TUBE ID:4 OD:5.3 L:10		
△	57	D-3610169101	DC JACK ASSY		
	63	D-3100100600	SCREW MACHINE M3*0.5*6	FOR METAL	X6
	64	D-3371002902	REAR COVER		
△	65	D-3610169000	PLUG ASS'Y CANNON HA16RA-4P		
	67	D-3100430600	SCREW M3*6 ZINC BLACK ANOZIDE		X4
	68	D-3109092100	SCREW TAPPING 2.6*6 (NI)		X10
	69	D-3230060600	KEY PAD KE-5140		
△	70	D-3360104800	FRONT BEZEL PC+ABS UL94V-0		
	71	D-3360147600	CONTROL SHEET		
	72	D-3360147301	ACRY BEZEL		
	73	D-3360167300	POWER KNOB PC+ABS UL94V-0		
	74	D-3421109100	SPRING SW 0.4mm		
	77	D-3421264000	BRACKET POWER KNOB SECC T=0.8		
	80	D-3106160400	SCREW TAP3*8 NI PLATED		X4
	81	D-3106164300	SCREW TAP $\phi$ 4*8 NI PLATED		X2
	82	D-3106164300	SCREW TAP $\phi$ 4*8 NI PLATED		X2
	83	D-3360154400	CASE SPEAKER PC+ABS UL94V-0		
	84	D-3620401011	FAN ASSY AFB0412LA		
	85	D-3790172900	SPEAKER ASS'Y ZEETEK NO 50Q#16		
		D-3200373200	LABEL SERIAL NUMBER		
		D-3201109300	LABEL ID DV-L50PN JVC(EUROPE)		
		D-3230054300	TUBE BINDER	FOR FBT WIRE	
		D-3240795400	INSULATOR TUBE WIRE SPIRAL		

**EXPLODED VIEW**









# PRINTED WIRING BOARD PARTS LIST

INTERFACE P.W. BOARD ASS'Y (D-5600091003)

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
RESISTOR				RESISTOR			
R719	D-0303101001		RES CH 1/8W 100 J 1206	R720	D-0343103102		RES CH 1/10W 10K J 0805
R719	D-0303101002		RES CH 1/8W 100 J 1206	R804	D-0343103102		RES CH 1/10W 10K J 0805
R719	D-0303101004		RES CH 1/8W 100 J 1206	R810	D-0343103102		RES CH 1/10W 10K J 0805
R811	D-0303102001		RES CH 1/8W 1K J 1206	R817	D-0343103102		RES CH 1/10W 10K J 0805
R818	D-0303102001		RES CH 1/8W 1K J 1206	R840	D-0343103102		RES CH 1/10W 10K J 0805
R811	D-0303102002		RES CH 1/8W 1K J 1206	R720	D-0343103104		RES CH 1/10W 10K J 0805
R818	D-0303102002		RES CH 1/8W 1K J 1206	R804	D-0343103104		RES CH 1/10W 10K J 0805
R811	D-0303102004		RES CH 1/8W 1K J 1206	R810	D-0343103104		RES CH 1/10W 10K J 0805
R818	D-0303102004		RES CH 1/8W 1K J 1206	R817	D-0343103104		RES CH 1/10W 10K J 0805
R802	D-0303680001		RES CH 1/8W 68 J 1206	R840	D-0343103104		RES CH 1/10W 10K J 0805
R802	D-0303680002		RES CH 1/8W 68 J 1206	R812	D-0343105101		RES CH 1/10W 1M J 0805
R802	D-0303680004		RES CH 1/8W 68 J 1206	R813	D-0343105101		RES CH 1/10W 1M J 0805
R803	D-0303750001		RES CH 1/8W 75 J 1206	R819	D-0343105101		RES CH 1/10W 1M J 0805
R808	D-0303750001		RES CH 1/8W 75 J 1206	R820	D-0343105101		RES CH 1/10W 1M J 0805
R815	D-0303750001		RES CH 1/8W 75 J 1206	R825	D-0343105101		RES CH 1/10W 1M J 0805
R824	D-0303750001		RES CH 1/8W 75 J 1206	R812	D-0343105102		RES CH 1/10W 1M J 0805
R803	D-0303750002		RES CH 1/8W 75 J 1206	R813	D-0343105102		RES CH 1/10W 1M J 0805
R808	D-0303750002		RES CH 1/8W 75 J 1206	R819	D-0343105102		RES CH 1/10W 1M J 0805
R815	D-0303750002		RES CH 1/8W 75 J 1206	R820	D-0343105102		RES CH 1/10W 1M J 0805
R824	D-0303750002		RES CH 1/8W 75 J 1206	R825	D-0343105102		RES CH 1/10W 1M J 0805
R803	D-0303750004		RES CH 1/8W 75 J 1206	R812	D-0343105104		RES CH 1/10W 1M J 0805
R808	D-0303750004		RES CH 1/8W 75 J 1206	R813	D-0343105104		RES CH 1/10W 1M J 0805
R815	D-0303750004		RES CH 1/8W 75 J 1206	R819	D-0343105104		RES CH 1/10W 1M J 0805
R824	D-0303750004		RES CH 1/8W 75 J 1206	R820	D-0343105104		RES CH 1/10W 1M J 0805
R718	D-0323330601		RES CH 1/2W 33 J 2010	R825	D-0343105104		RES CH 1/10W 1M J 0805
R740	D-0323330601		RES CH 1/2W 33 J 2010	R706	D-0343123101		RES CH 1/10W 12K J 0805
R718	D-0323330602		RES CH 1/2W 33 J 2010	R715	D-0343123101		RES CH 1/10W 12K J 0805
R740	D-0323330602		RES CH 1/2W 33 J 2010	R706	D-0343123102		RES CH 1/10W 12K J 0805
R718	D-0323330604		RES CH 1/2W 33 J 2010	R715	D-0343123102		RES CH 1/10W 12K J 0805
R740	D-0323330604		RES CH 1/2W 33 J 2010	R706	D-0343123104		RES CH 1/10W 12K J 0805
R702	D-0323821601		RES CH 1/2W 820 J 2010	R715	D-0343123104		RES CH 1/10W 12K J 0805
R702A	D-0323821601		RES CH 1/2W 820 J 2010	R805	D-0343153101		RES CH 1/10W 15K J 0805
R702	D-0323821602		RES CH 1/2W 820 J 2010	R805	D-0343153102		RES CH 1/10W 15K J 0805
R702A	D-0323821602		RES CH 1/2W 820 J 2010	R805	D-0343153104		RES CH 1/10W 15K J 0805
R702	D-0323821604		RES CH 1/2W 820 J 2010	R837	D-0343202101		RES CH 1/10W 2K J 0805
R702A	D-0323821604		RES CH 1/2W 820 J 2010	R838	D-0343202101		RES CH 1/10W 2K J 0805
R705	D-0341067101		RES CH 1/10W 22K F 0805	R837	D-0343202104		RES CH 1/10W 2K J 0805
R708	D-0341067101		RES CH 1/10W 22K F 0805	R838	D-0343202102		RES CH 1/10W 2K J 0805
R705	D-0341067102		RES CH 1/10W 22K F 0805	R837	D-0343202104		RES CH 1/10W 2K J 0805
R708	D-0341067102		RES CH 1/10W 22K F 0805	R838	D-0343202104		RES CH 1/10W 2K J 0805
R705	D-0341067104		RES CH 1/10W 22K F 0805	R713	D-0343223101		RES CH 1/10W 22K J 0805
R708	D-0341067104		RES CH 1/10W 22K F 0805	R809	D-0343223101		RES CH 1/10W 22K J 0805
R704	D-0341087101		RES CH 1/10W 100K F 0805	R816	D-0343223101		RES CH 1/10W 22K J 0805
R723	D-0341087101		RES CH 1/10W 100K F 0805	R713	D-0343223102		RES CH 1/10W 22K J 0805
R704	D-0341087102		RES CH 1/10W 100K F 0805	R809	D-0343223102		RES CH 1/10W 22K J 0805
R723	D-0341087102		RES CH 1/10W 100K F 0805	R816	D-0343223102		RES CH 1/10W 22K J 0805
R704	D-0341087104		RES CH 1/10W 100K F 0805	R713	D-0343223104		RES CH 1/10W 22K J 0805
R723	D-0341087104		RES CH 1/10W 100K F 0805	R809	D-0343223104		RES CH 1/10W 22K J 0805
R722	D-0341095101		RES CH 1/10W 221K F 0805	R816	D-0343223104		RES CH 1/10W 22K J 0805
R722	D-0341095102		RES CH 1/10W 221K F 0805	R701	D-0343241101		RES CH 1/10W 240 J 0805
R722	D-0341095104		RES CH 1/10W 221K F 0805	R701	D-0343241102		RES CH 1/10W 240 J 0805
R707	D-0341157101		RES CH 1/10W 110K F 0805	R701	D-0343241104		RES CH 1/10W 240 J 0805
R707	D-0341157102		RES CH 1/10W 110K F 0805	R822	D-0343242101		RES CH 1/10W 2.4K J 0805
R707	D-0341157104		RES CH 1/10W 110K F 0805	R823	D-0343242101		RES CH 1/10W 2.4K J 0805
R709	D-0343102101		RES CH 1/10W 1K J 0805	R822	D-0343242102		RES CH 1/10W 2.4K J 0805
R710	D-0343102101		RES CH 1/10W 1K J 0805	R823	D-0343242102		RES CH 1/10W 2.4K J 0805
R721	D-0343102101		RES CH 1/10W 1K J 0805	R822	D-0343242104		RES CH 1/10W 2.4K J 0805
R806	D-0343102101		RES CH 1/10W 1K J 0805	R823	D-0343242104		RES CH 1/10W 2.4K J 0805
R834	D-0343102101		RES CH 1/10W 1K J 0805	R830	D-0343272101		RES CH 1/10W 2.7K J 0805
R709	D-0343102102		RES CH 1/10W 1K J 0805	R830	D-0343272102		RES CH 1/10W 2.7K J 0805
R710	D-0343102102		RES CH 1/10W 1K J 0805	R830	D-0343272104		RES CH 1/10W 2.7K J 0805
R721	D-0343102102		RES CH 1/10W 1K J 0805	R801	D-0343331101		RES CH 1/10W 330 J 0805
R806	D-0343102102		RES CH 1/10W 1K J 0805	R801	D-0343331102		RES CH 1/10W 330 J 0805
R834	D-0343102102		RES CH 1/10W 1K J 0805	R801	D-0343331104		RES CH 1/10W 330 J 0805
R709	D-0343102104		RES CH 1/10W 1K J 0805	R839	D-0343332101		RES CH 1/10W 3.3K J 0805
R710	D-0343102104		RES CH 1/10W 1K J 0805	R839	D-0343332102		RES CH 1/10W 3.3K J 0805
R721	D-0343102104		RES CH 1/10W 1K J 0805	R839	D-0343332104		RES CH 1/10W 3.3K J 0805
R806	D-0343102104		RES CH 1/10W 1K J 0805	R826	D-0343362101		RES CH 1/10W 3.6K J 0805
R834	D-0343102104		RES CH 1/10W 1K J 0805	R826	D-0343362102		RES CH 1/10W 3.6K J 0805
R720	D-0343103101		RES CH 1/10W 10K J 0805	R826	D-0343362104		RES CH 1/10W 3.6K J 0805
R804	D-0343103101		RES CH 1/10W 10K J 0805	R833	D-0343433101		RES CH 1/10W 43K J 0805
R810	D-0343103101		RES CH 1/10W 10K J 0805	R833	D-0343433102		RES CH 1/10W 43K J 0805
R817	D-0343103101		RES CH 1/10W 10K J 0805	R833	D-0343433104		RES CH 1/10W 43K J 0805
R840	D-0343103101		RES CH 1/10W 10K J 0805	R711	D-0343472101		RES CH 1/10W 4.7K J 0805



△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>				<b>CAPACITOR</b>			
R712	D-0343472101	RES CH 1/10W 4.7K J 0805	C801	D-1512458102	CAP MC CP 50V .1U K X7R 0805		
R724	D-0343472101	RES CH 1/10W 4.7K J 0805	C804	D-1512458102	CAP MC CP 50V .1U K X7R 0805		
R821	D-0343472101	RES CH 1/10W 4.7K J 0805	C820	D-1512458102	CAP MC CP 50V .1U K X7R 0805		
R829	D-0343472101	RES CH 1/10W 4.7K J 0805	C821	D-1512458102	CAP MC CP 50V .1U K X7R 0805		
R836	D-0343472101	RES CH 1/10W 4.7K J 0805	C701	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R711	D-0343472102	RES CH 1/10W 4.7K J 0805	C702	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R712	D-0343472102	RES CH 1/10W 4.7K J 0805	C705	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R724	D-0343472102	RES CH 1/10W 4.7K J 0805	C707	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R821	D-0343472102	RES CH 1/10W 4.7K J 0805	C713	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R829	D-0343472102	RES CH 1/10W 4.7K J 0805	C715	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R836	D-0343472102	RES CH 1/10W 4.7K J 0805	C717	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R711	D-0343472104	RES CH 1/10W 4.7K J 0805	C77	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R712	D-0343472104	RES CH 1/10W 4.7K J 0805	C801	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R724	D-0343472104	RES CH 1/10W 4.7K J 0805	C804	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R821	D-0343472104	RES CH 1/10W 4.7K J 0805	C820	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R829	D-0343472104	RES CH 1/10W 4.7K J 0805	C821	D-1512458103	CAP MC CP 50V .1U K X7R 0805		
R836	D-0343472104	RES CH 1/10W 4.7K J 0805	C701	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R814	D-0343473101	RES CH 1/10W 47K J 0805	C702	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R832	D-0343473101	RES CH 1/10W 47K J 0805	C705	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R835	D-0343473101	RES CH 1/10W 47K J 0805	C707	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R814	D-0343473102	RES CH 1/10W 47K J 0805	C713	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R832	D-0343473102	RES CH 1/10W 47K J 0805	C715	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R835	D-0343473102	RES CH 1/10W 47K J 0805	C717	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R814	D-0343473104	RES CH 1/10W 47K J 0805	C77	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R832	D-0343473104	RES CH 1/10W 47K J 0805	C801	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R835	D-0343473104	RES CH 1/10W 47K J 0805	C804	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R828	D-0343563102	RES CH 1/10W 56K J 0805	C820	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R828	D-0343563104	RES CH 1/10W 56K J 0805	C821	D-1512458109	CAP MC CP 50V .1U K X7R 0805		
R831	D-0343684101	RES CH 1/10W 680K J 0805	C803	D-1513659102	CAP MC CP 50V .22U M Y5V 0805		
R831	D-0343684102	RES CH 1/10W 680K J 0805	C806	D-1517659102	CAP MC CP 50V .22U Z Y5V 0805		
R831	D-0343684104	RES CH 1/10W 680K J 0805	C806	D-1517659103	CAP MC CP 50V .22U Z Y5V 0805		
R725	D-0343751101	RES CH 1/10W 750 J 0805	<b>DIODE</b>				
R725	D-0343751102	RES CH 1/10W 750 J 0805	ZD702	D-2020280207	DIO SBD 1A 20V DO-214AC		
R725	D-0343751104	RES CH 1/10W 750 J 0805	ZD703	D-2030023205	DIO ZEN 0.4W 8.57-9.01V LL-34		
R827	D-0343822101	RES CH 1/10W 8.2K J 0805	D702	D-2040010201	DIO SW 0.2A 75V MELF		
R827	D-0343822102	RES CH 1/10W 8.2K J 0805	D703	D-2040010201	DIO SW 0.2A 75V MELF		
R827	D-0343822104	RES CH 1/10W 8.2K J 0805	D704	D-2040010201	DIO SW 0.2A 75V MELF		
R726	D-0345104111	RES CH 1/10W 470K D 0805	D705	D-2040010201	DIO SW 0.2A 75V MELF		
<b>CAPACITOR</b>				D706	D-2040010201	DIO SW 0.2A 75V MELF	
C718	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D707	D-2040010201	DIO SW 0.2A 75V MELF		
C802A	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D708	D-2040010201	DIO SW 0.2A 75V MELF		
C802B	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D711	D-2040010201	DIO SW 0.2A 75V MELF		
C805A	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D712	D-2040010201	DIO SW 0.2A 75V MELF		
C805B	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D713	D-2040010201	DIO SW 0.2A 75V MELF		
C805C	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D801	D-2040010201	DIO SW 0.2A 75V MELF		
C807	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D802	D-2040010201	DIO SW 0.2A 75V MELF		
C809	D-1483803318	CAP AL CP 10V 220U M 10.1*4.6*	D803	D-2040010201	DIO SW 0.2A 75V MELF		
C704	D-1493209018	CAP AL CP 25V 10U M 6.3*3.6*3.	D804	D-2040010201	DIO SW 0.2A 75V MELF		
C706	D-1493209018	CAP AL CP 25V 10U M 6.3*3.6*3.	D805	D-2040010201	DIO SW 0.2A 75V MELF		
C808	D-1493209018	CAP AL CP 25V 10U M 6.3*3.6*3.	D806	D-2040010201	DIO SW 0.2A 75V MELF		
C810	D-1493209018	CAP AL CP 25V 10U M 6.3*3.6*3.	D807	D-2040010201	DIO SW 0.2A 75V MELF		
C819	D-1493215018	CAP AL CP 50V 1U M 6.3*3.6*3.6	D808	D-2040010201	DIO SW 0.2A 75V MELF		
C811	D-1493507118	CAP AL CP 16V 47U M 7.1*4.6*4.	D809	D-2040010201	DIO SW 0.2A 75V MELF		
C812	D-1493507118	CAP AL CP 16V 47U M 7.1*4.6*4.	D810	D-2040010201	DIO SW 0.2A 75V MELF		
C813	D-1493507118	CAP AL CP 16V 47U M 7.1*4.6*4.	D702	D-2040010202	DIO SW 0.2A 75V MELF		
C703	D-1493807318	CAP AL CP 16V 100U M 10.1*4.6*	D703	D-2040010202	DIO SW 0.2A 75V MELF		
C716	D-1493807318	CAP AL CP 16V 100U M 10.1*4.6*	D704	D-2040010202	DIO SW 0.2A 75V MELF		
C716A	D-1493807318	CAP AL CP 16V 100U M 10.1*4.6*	D705	D-2040010202	DIO SW 0.2A 75V MELF		
C709	D-1493811918	CAP AL CP 25V 68U M 10.1*4.6*4	D706	D-2040010202	DIO SW 0.2A 75V MELF		
C709A	D-1493811918	CAP AL CP 25V 68U M 10.1*4.6*4	D707	D-2040010202	DIO SW 0.2A 75V MELF		
C714	D-1493811918	CAP AL CP 25V 68U M 10.1*4.6*4	D708	D-2040010202	DIO SW 0.2A 75V MELF		
C818	D-1511522102	CAP MC CP 50V 47P J COG 0805	D711	D-2040010202	DIO SW 0.2A 75V MELF		
C818	D-1511522103	CAP MC CP 50V 47P J COG 0805	D712	D-2040010202	DIO SW 0.2A 75V MELF		
C818	D-1511522109	CAP MC CP 50V 47P J COG 0805	D713	D-2040010202	DIO SW 0.2A 75V MELF		
C817	D-1512454102	CAP MC CP 50V .01U K X7R 0805	D801	D-2040010202	DIO SW 0.2A 75V MELF		
C817	D-1512454103	CAP MC CP 50V .01U K X7R 0805	D802	D-2040010202	DIO SW 0.2A 75V MELF		
C817	D-1512454109	CAP MC CP 50V .01U K X7R 0805	D803	D-2040010202	DIO SW 0.2A 75V MELF		
C701	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D804	D-2040010202	DIO SW 0.2A 75V MELF		
C702	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D805	D-2040010202	DIO SW 0.2A 75V MELF		
C705	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D806	D-2040010202	DIO SW 0.2A 75V MELF		
C707	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D807	D-2040010202	DIO SW 0.2A 75V MELF		
C713	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D808	D-2040010202	DIO SW 0.2A 75V MELF		
C715	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D809	D-2040010202	DIO SW 0.2A 75V MELF		
C717	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D810	D-2040010202	DIO SW 0.2A 75V MELF		
C77	D-1512458102	CAP MC CP 50V .1U K X7R 0805	D702	D-2040010203	DIO SW .3A 75V MELF		

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>DIODE</b>				<b>TRANSISTOR</b>			
D703	D-2040010203	DIO SW .3A 75V MELF		Q808	D-2140018002	TR 40V 0.2A SOT23	
D704	D-2040010203	DIO SW .3A 75V MELF		Q810	D-2140018002	TR 40V 0.2A SOT23	
D705	D-2040010203	DIO SW .3A 75V MELF		Q701	D-2140018003	TR 40V 0.2A SOT23	
D706	D-2040010203	DIO SW .3A 75V MELF		Q808	D-2140018003	TR 40V 0.2A SOT23	
D707	D-2040010203	DIO SW .3A 75V MELF		Q810	D-2140018003	TR 40V 0.2A SOT23	
D708	D-2040010203	DIO SW .3A 75V MELF		Q703	D-2140043506	TR 50V .1A SC-59	
D711	D-2040010203	DIO SW .3A 75V MELF		Q704	D-2140043506	TR 50V .1A SC-59	
D712	D-2040010203	DIO SW .3A 75V MELF		Q706	D-2140043506	TR 50V .1A SC-59	
D713	D-2040010203	DIO SW .3A 75V MELF		Q707	D-2140043506	TR 50V .1A SC-59	
D801	D-2040010203	DIO SW .3A 75V MELF		Q711	D-2140043506	TR 50V .1A SC-59	
D802	D-2040010203	DIO SW .3A 75V MELF		Q802	D-2140043506	TR 50V .1A SC-59	
D803	D-2040010203	DIO SW .3A 75V MELF		Q812	D-2140043506	TR 50V .1A SC-59	
D804	D-2040010203	DIO SW .3A 75V MELF		Q813	D-2140043506	TR 50V .1A SC-59	
D805	D-2040010203	DIO SW .3A 75V MELF		<b>IC</b>			
D806	D-2040010203	DIO SW .3A 75V MELF		IC702	D-2520008101	IC OP AMP SO-8PIN	
D807	D-2040010203	DIO SW .3A 75V MELF		IC702	D-2520008108	IC OP AMP SO-8PIN	
D808	D-2040010203	DIO SW .3A 75V MELF		IC702	D-2520008110	IC OP AMP SO-8PIN	
D809	D-2040010203	DIO SW .3A 75V MELF		IC702	D-2520008111	IC OP AMP SO-8PIN	
D810	D-2040010203	DIO SW .3A 75V MELF		IC802	D-2610034107	IC MULTIPLEX/DEMUTIPLEX SO-16	
D702	D-2040010204	DIO SW 0.2A 75V LL-34		<b>COIL</b>			
D703	D-2040010204	DIO SW 0.2A 75V LL-34		L702	D-2921120204	CORE BEAD 4.2*3.2*2.6 CHIP	
D704	D-2040010204	DIO SW 0.2A 75V LL-34		L703	D-2921120204	CORE BEAD 4.2*3.2*2.6 CHIP	
D705	D-2040010204	DIO SW 0.2A 75V LL-34		L801	D-2921120204	CORE BEAD 4.2*3.2*2.6 CHIP	
D706	D-2040010204	DIO SW 0.2A 75V LL-34		<b>OTHER</b>			
D707	D-2040010204	DIO SW 0.2A 75V LL-34		△ F701	D-0868211001	FUSE F/SMD 7A 125V 2410	
D708	D-2040010204	DIO SW 0.2A 75V LL-34		<b>VR</b>			
D711	D-2040010204	DIO SW 0.2A 75V LL-34		VR701	D-0604202005	RES VR HORI 2K K	
D712	D-2040010204	DIO SW 0.2A 75V LL-34		<b>CAPACITOR</b>			
D713	D-2040010204	DIO SW 0.2A 75V LL-34		C712	D-1430803505	CAP AL 10V 470U M 8*12.5	
D801	D-2040010204	DIO SW 0.2A 75V LL-34		C712	D-1430803507	CAP AL 10V 470U M 8*11.5	
D802	D-2040010204	DIO SW 0.2A 75V LL-34		<b>DIODE</b>			
D803	D-2040010204	DIO SW 0.2A 75V LL-34		△ D709	D-2020080402	DIO SBD 3A 40V D201	
D804	D-2040010204	DIO SW 0.2A 75V LL-34		△ D710	D-2020080402	DIO SBD 3A 40V D201	
D805	D-2040010204	DIO SW 0.2A 75V LL-34		ZD701	D-2030120816	DIO ZEN .5W 4.9-5.1V D35	
D806	D-2040010204	DIO SW 0.2A 75V LL-34		D701	D-2050011001	DIO SI 1A 100V D41	
D807	D-2040010204	DIO SW 0.2A 75V LL-34		D701	D-2050011011	DIO SI 1A 100V D15	
D808	D-2040010204	DIO SW 0.2A 75V LL-34		<b>TRANSISTOR</b>			
D809	D-2040010204	DIO SW 0.2A 75V LL-34		Q708	D-2100070010	TR 60V 3A 2045	
D810	D-2040010204	DIO SW 0.2A 75V LL-34		△ Q702	D-2420023010	FET -55V -74A TO-220AB	
<b>TRANSISTOR</b>				△ Q705	D-2420023010	FET -55V -74A TO-220AB	
Q803	D-2140017001	TR 40V 0.2A SOT23		△ Q709	D-2420023010	FET -55V -74A TO-220AB	
Q804	D-2140017001	TR 40V 0.2A SOT23		<b>IC</b>			
Q805	D-2140017001	TR 40V 0.2A SOT23		IC701	D-2500002213	IC VOL ADJ T92 3PIN	
Q806	D-2140017001	TR 40V 0.2A SOT23		IC703	D-2500057111	IC REGU 1.23~57V 1A TO220 SLEA	
Q807	D-2140017001	TR 40V 0.2A SOT23		<b>COIL</b>			
Q809	D-2140017001	TR 40V 0.2A SOT23		L701	D-2816315210	CHOKE CD-8 430uH	
Q803	D-2140017002	TR 40V 0.2A SOT23		<b>OTHER</b>			
Q804	D-2140017002	TR 40V 0.2A SOT23			D-3071519900	PHONE JACK 5P	
Q805	D-2140017002	TR 40V 0.2A SOT23			D-3072203200	CONN BNC 1*2 WITH SWITCH	
Q806	D-2140017002	TR 40V 0.2A SOT23			D-3072203200	CONN BNC 1*2 WITH SWITCH	
Q807	D-2140017002	TR 40V 0.2A SOT23			D-3072203300	CONN RCA JACK 1*2	
Q809	D-2140017002	TR 40V 0.2A SOT23					
Q803	D-2140017003	TR 40V 0.2A SOT23					
Q804	D-2140017003	TR 40V 0.2A SOT23					
Q805	D-2140017003	TR 40V 0.2A SOT23					
Q806	D-2140017003	TR 40V 0.2A SOT23					
Q807	D-2140017003	TR 40V 0.2A SOT23					
Q809	D-2140017003	TR 40V 0.2A SOT23					
Q701	D-2140018001	TR 40V 0.2A SOT23					
Q808	D-2140018001	TR 40V 0.2A SOT23					
Q810	D-2140018001	TR 40V 0.2A SOT23					
Q701	D-2140018002	TR 40V 0.2A SOT23					

## KEY- VR [DRIVE VR] P.W.BOARD ASS'Y (D-5600091004)

△ SYMBOL NO.	PART NO.	DESCRIPTION
<b>VR</b>		
VR602	D-0607411005	RES VR HORI 3K K
VR603	D-0607411005	RES VR HORI 3K K
VR604	D-0607411005	RES VR HORI 3K K
<b>CAPACITOR</b>		
C635	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C636	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C637	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C638	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C635	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C636	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C637	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C638	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C635	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C636	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C637	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C638	D-1512458109	CAP MC CP 50V .1U K X7R 0805

## KEY-VR [FRONT KEY] P.W.BOARD ASS'Y (D-5600092001)

△ SYMBOL NO.	PART NO.	DESCRIPTION
<b>CAPACITOR</b>		
C751	D-1493209018	CAP AL CP 25V 10U M 6.3*3.6*3.
<b>RESISTOR</b>		
R759	D-0313471001	RES CH 1/4W 470 J 1206
R760	D-0313471001	RES CH 1/4W 470 J 1206
R761	D-0313471001	RES CH 1/4W 470 J 1206
R762	D-0313471001	RES CH 1/4W 470 J 1206
R763	D-0313471001	RES CH 1/4W 470 J 1206
R759	D-0313471002	RES CH 1/4W 470 J 1206
R760	D-0313471002	RES CH 1/4W 470 J 1206
R761	D-0313471002	RES CH 1/4W 470 J 1206
R762	D-0313471002	RES CH 1/4W 470 J 1206
R763	D-0313471002	RES CH 1/4W 470 J 1206
R759	D-0313471004	RES CH 1/4W 470 J 1206
R760	D-0313471004	RES CH 1/4W 470 J 1206
R761	D-0313471004	RES CH 1/4W 470 J 1206
R762	D-0313471004	RES CH 1/4W 470 J 1206
R763	D-0313471004	RES CH 1/4W 470 J 1206
R753	D-0343103101	RES CH 1/10W 10K J 0805
R757	D-0343103101	RES CH 1/10W 10K J 0805
R765	D-0343103101	RES CH 1/10W 10K J 0805
R753	D-0343103102	RES CH 1/10W 10K J 0805
R757	D-0343103102	RES CH 1/10W 10K J 0805
R765	D-0343103102	RES CH 1/10W 10K J 0805
R753	D-0343103104	RES CH 1/10W 10K J 0805
R757	D-0343103104	RES CH 1/10W 10K J 0805
R765	D-0343103104	RES CH 1/10W 10K J 0805
R752	D-0343223101	RES CH 1/10W 22K J 0805
R756	D-0343223101	RES CH 1/10W 22K J 0805
R752	D-0343223102	RES CH 1/10W 22K J 0805
R756	D-0343223102	RES CH 1/10W 22K J 0805
R752	D-0343223104	RES CH 1/10W 22K J 0805
R756	D-0343223104	RES CH 1/10W 22K J 0805
R754	D-0343333101	RES CH 1/10W 33K J 0805
R758	D-0343333101	RES CH 1/10W 33K J 0805
R754	D-0343333102	RES CH 1/10W 33K J 0805
R758	D-0343333102	RES CH 1/10W 33K J 0805
R754	D-0343333104	RES CH 1/10W 33K J 0805
R758	D-0343333104	RES CH 1/10W 33K J 0805
R764	D-0343472101	RES CH 1/10W 4.7K J 0805
R764	D-0343472102	RES CH 1/10W 4.7K J 0805
R764	D-0343472104	RES CH 1/10W 4.7K J 0805

△ SYMBOL NO.	PART NO.	DESCRIPTION
<b>CAPACITOR</b>		
R751	D-0343683101	RES CH 1/10W 68K J 0805
R755	D-0343683101	RES CH 1/10W 68K J 0805
R751	D-0343683102	RES CH 1/10W 68K J 0805
R755	D-0343683102	RES CH 1/10W 68K J 0805
R751	D-0343683104	RES CH 1/10W 68K J 0805
R755	D-0343683104	RES CH 1/10W 68K J 0805
C752	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C753	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C754	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C755	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C756	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C757	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C758	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C759	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C760	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C752	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C753	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C754	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C755	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C756	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C757	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C758	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C759	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C760	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C752	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C753	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C754	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C755	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C756	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C757	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C758	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C759	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C760	D-1512458109	CAP MC CP 50V .1U K X7R 0805
<b>DIODE</b>		
D751	D-2040010201	DIO SW 0.2A 75V MELF
D752	D-2040010201	DIO SW 0.2A 75V MELF
D751	D-2040010202	DIO SW 0.2A 75V MELF
D752	D-2040010202	DIO SW 0.2A 75V MELF
D751	D-2040010203	DIO SW .3A 75V MELF
D752	D-2040010203	DIO SW .3A 75V MELF
D751	D-2040010204	DIO SW 0.2A 75V LL-34
D752	D-2040010204	DIO SW 0.2A 75V LL-34
LD1	D-2300531506	LED GREEN 1.9mm SMD
LD2	D-2300531506	LED GREEN 1.9mm SMD
LD3	D-2300531506	LED GREEN 1.9mm SMD
LD4	D-2301122406	LED GRN/RED 3mm
<b>TRANSISTOR</b>		
Q751	D-2140043506	TR 50V .1A SC-59
Q752	D-2140043506	TR 50V .1A SC-59
Q753	D-2140043506	TR 50V .1A SC-59
Q754	D-2140043506	TR 50V .1A SC-59
Q755	D-2140043506	TR 50V .1A SC-59
Q756	D-2140043506	TR 50V .1A SC-59
Q757	D-2140043506	TR 50V .1A SC-59

## EARPHONE P.W.BOARD ASS'Y (D-5600091007)

△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>			
R881	D-0313471001		RES CH 1/4W 470 J 1206
R881	D-0313471002		RES CH 1/4W 470 J 1206
R881	D-0313471004		RES CH 1/4W 470 J 1206
<b>CAPACITOR</b>			
C880	D-1511545102		CAP MC CP 50V 1KP J COG 0805
C882	D-1511545102		CAP MC CP 50V 1KP J COG 0805
C880	D-1511545103		CAP MC CP 50V 1KP J COG 0805
C882	D-1511545103		CAP MC CP 50V 1KP J COG 0805
C880	D-1511545109		CAP MC CP 50V 1KP J COG 0805
C882	D-1511545109		CAP MC CP 50V 1KP J COG 0805
<b>COIL</b>			
L881	D-2921111322		CORE BEAD 1206 SMD
<b>OTHER</b>			
	D-3072203800		CONN JACK

## CRT SOCKET P.W.BOARD ASS'Y (D-5600097001)

△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>			
R636	D-0123104822		RES MOF 1/2W 100K J SMALL
R637	D-0123104822		RES MOF 1/2W 100K J SMALL
R623	D-0123221822		RES MOF 1/2W 220 J SMALL
R635	D-0123472822		RES MOF 1/2W 4.7K J SMALL
<b>CAPACITOR</b>			
C632	D-1142354401		CAP CD 1KV .01U M Z5U K110
C633	D-1142354401		CAP CD 1KV .01U M Z5U K110
C632	D-1142354403		CAP CD 1KV .01U M Z5U K110
C633	D-1142354403		CAP CD 1KV .01U M Z5U K110
C631	D-1142942801		CAP CD 1KV 470P K Y5P TP5
C631	D-1142942803		CAP CD 1KV 470P K Y5P TP5
C614	D-1432309103		CAP AL 25V 100U M 6.3*11 TP
C614	D-1432309105		CAP AL 25V 100U M 6.3*11 TP
C614	D-1432309107		CAP AL 25V 100U M 6.3*11 TP
C612	D-1432309505		CAP AL 25V 47U M 5*11.5 TP
C612	D-1432309507		CAP AL 25V 47U M 5*11 TP
C602	D-1432312007		CAP AL 35V 10U M 5*11 TP
C626	D-1432322005		CAP AL 100V 22U M 8*11.5 TP
C626	D-1432322007		CAP AL 100V 22U M 8*11.5 TP
<b>TRANSISTOR</b>			
Q602	D-2100063013		TR 40V 0.5A T92
<b>COIL</b>			
L601	D-2922280006		PEAKING COIL 100uH K TP AXIAL
L602	D-2922280006		PEAKING COIL 100uH K TP AXIAL
L605	D-2922320014		COIL PEAKING 15uH K TP
<b>RESISTOR</b>			
R616	D-0313101001		RES CH 1/4W 100 J 1206
R616	D-0313101002		RES CH 1/4W 100 J 1206
R616	D-0313101004		RES CH 1/4W 100 J 1206
R634	D-0313228001		RES CH 1/4W 2.2 J 1206
R634	D-0313228004		RES CH 1/4W 2.2 J 1206
R606	D-0341111101		RES CH 1/10W 49.9K F 0805
R606	D-0341111102		RES CH 1/10W 49.9K F 0805
R606	D-0341111104		RES CH 1/10W 49.9K F 0805
R608	D-0341399101		RES CH 1/10W 7.15K F 0805
R608	D-0341399104		RES CH 1/10W 7.15K F 0805
R611	D-0343102101		RES CH 1/10W 1K J 0805
R625	D-0343102101		RES CH 1/10W 1K J 0805
R611	D-0343102102		RES CH 1/10W 1K J 0805
R625	D-0343102102		RES CH 1/10W 1K J 0805
R611	D-0343102104		RES CH 1/10W 1K J 0805
R625	D-0343102104		RES CH 1/10W 1K J 0805
R615	D-0343103101		RES CH 1/10W 10K J 0805
R617	D-0343103101		RES CH 1/10W 10K J 0805
R632	D-0343103101		RES CH 1/10W 10K J 0805
R638	D-0343103101		RES CH 1/10W 10K J 0805
R615	D-0343103102		RES CH 1/10W 10K J 0805
R617	D-0343103102		RES CH 1/10W 10K J 0805
R632	D-0343103102		RES CH 1/10W 10K J 0805
R638	D-0343103102		RES CH 1/10W 10K J 0805

△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>			
R615	D-0343103104		RES CH 1/10W 10K J 0805
R617	D-0343103104		RES CH 1/10W 10K J 0805
R632	D-0343103104		RES CH 1/10W 10K J 0805
R638	D-0343103104		RES CH 1/10W 10K J 0805
R631	D-0343104101		RES CH 1/10W 100K J 0805
R640	D-0343104101		RES CH 1/10W 100K J 0805
R631	D-0343104102		RES CH 1/10W 100K J 0805
R640	D-0343104102		RES CH 1/10W 100K J 0805
R631	D-0343104104		RES CH 1/10W 100K J 0805
R640	D-0343104104		RES CH 1/10W 100K J 0805
R626	D-0343182101		RES CH 1/10W 1.8K J 0805
R626	D-0343182102		RES CH 1/10W 1.8K J 0805
R626	D-0343182104		RES CH 1/10W 1.8K J 0805
R628	D-0343222101		RES CH 1/10W 2.2K J 0805
R628	D-0343222102		RES CH 1/10W 2.2K J 0805
R628	D-0343222104		RES CH 1/10W 2.2K J 0805
R603	D-0343223101		RES CH 1/10W 22K J 0805
R603	D-0343223102		RES CH 1/10W 22K J 0805
R603	D-0343223104		RES CH 1/10W 22K J 0805
R627	D-0343272101		RES CH 1/10W 2.7K J 0805
R627	D-0343272102		RES CH 1/10W 2.7K J 0805
R627	D-0343272104		RES CH 1/10W 2.7K J 0805
R609	D-0343278101		RES CH 1/10W 2.7 J 0805
R609	D-0343278102		RES CH 1/10W 2.7 J 0805
R609	D-0343278104		RES CH 1/10W 2.7 J 0805
R618	D-0343331101		RES CH 1/10W 330 J 0805
R618	D-0343331102		RES CH 1/10W 330 J 0805
R618	D-0343331104		RES CH 1/10W 330 J 0805
R607	D-0343332101		RES CH 1/10W 3.3K J 0805
R607	D-0343332102		RES CH 1/10W 3.3K J 0805
R607	D-0343332104		RES CH 1/10W 3.3K J 0805
R602	D-0343472101		RES CH 1/10W 4.7K J 0805
R604	D-0343472101		RES CH 1/10W 4.7K J 0805
R629	D-0343472101		RES CH 1/10W 4.7K J 0805
R602	D-0343472102		RES CH 1/10W 4.7K J 0805
R604	D-0343472102		RES CH 1/10W 4.7K J 0805
R629	D-0343472102		RES CH 1/10W 4.7K J 0805
R602	D-0343472104		RES CH 1/10W 4.7K J 0805
R604	D-0343472104		RES CH 1/10W 4.7K J 0805
R629	D-0343472104		RES CH 1/10W 4.7K J 0805
R630	D-0343473101		RES CH 1/10W 47K J 0805
R630	D-0343473102		RES CH 1/10W 47K J 0805
R630	D-0343473104		RES CH 1/10W 47K J 0805
R605	D-0343560101		RES CH 1/10W 56 J 0805
R614	D-0343560101		RES CH 1/10W 56 J 0805
R605	D-0343560102		RES CH 1/10W 56 J 0805
R614	D-0343560102		RES CH 1/10W 56 J 0805
R605	D-0343560104		RES CH 1/10W 56 J 0805
R614	D-0343560104		RES CH 1/10W 56 J 0805
R639	D-0343681101		RES CH 1/10W 680 J 0805
R601	D-0343750101		RES CH 1/10W 75 J 0805
R601	D-0343750102		RES CH 1/10W 75J 0805
R601	D-0343750104		RES CH 1/10W 75 J 0805
R613	D-0345044111		RES CH 1/10W 1.8K D 0805
<b>CAPACITOR</b>			
C623	D-1511538102		CAP MC CP 50V 220P J COG 0805
C623	D-1511538103		CAP MC CP 50V 220P J COG 0805
C623	D-1511538109		CAP MC CP 50V 220P J COG 0805
C627	D-1511542102		CAP MC CP 50V 470P J COG 0805
C627	D-1511542103		CAP MC CP 50V 470P J COG 0805
C627	D-1511542109		CAP MC CP 50V 470P J COG 0805
C604	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C604	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C604	D-1512454109		CAP MC CP 50V .01U K X7R 0805
C605	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C607	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C613	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C615	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C618	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C619	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C620	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C622	D-1512458102		CAP MC CP 50V .1U K X7R 0805
C628	D-1512458102		CAP MC CP 50V .1U K X7R 0805

VIDEO PROCESSOR P.W.BOARD ASS'Y (D-5600099001)		
△ SYMBOL NO.	PART NO.	DESCRIPTION
<b>CAPACITOR</b>		
C629	D-1512458102	CAP MC CP 50V .1U K X7R 0805
C605	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C607	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C613	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C615	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C618	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C619	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C620	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C622	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C628	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C629	D-1512458103	CAP MC CP 50V .1U K X7R 0805
C605	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C607	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C613	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C615	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C618	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C619	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C620	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C622	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C628	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C629	D-1512458109	CAP MC CP 50V .1U K X7R 0805
C625	D-1522454102	CAP MC CP 100V .01U K X7R 0805
<b>DIODE</b>		
D601	D-2040010201	DIO SW 0.2A 75V MELF
D602	D-2040010201	DIO SW 0.2A 75V MELF
D603	D-2040010201	DIO SW 0.2A 75V MELF
D604	D-2040010201	DIO SW 0.2A 75V MELF
D601	D-2040010202	DIO SW 0.2A 75V MELF
D602	D-2040010202	DIO SW 0.2A 75V MELF
D603	D-2040010202	DIO SW 0.2A 75V MELF
D604	D-2040010202	DIO SW 0.2A 75V MELF
D601	D-2040010203	DIO SW .3A 75V MELF
D602	D-2040010203	DIO SW .3A 75V MELF
D603	D-2040010203	DIO SW .3A 75V MELF
D604	D-2040010203	DIO SW .3A 75V MELF
D601	D-2040010204	DIO SW 0.2A 75V LL-34
D602	D-2040010204	DIO SW 0.2A 75V LL-34
D603	D-2040010204	DIO SW 0.2A 75V LL-34
D604	D-2040010204	DIO SW 0.2A 75V LL-34
<b>TRANSISTOR</b>		
Q601	D-2140017001	TR 40V 0.2A SOT23
Q606	D-2140017001	TR 40V 0.2A SOT23
Q601	D-2140017002	TR 40V 0.2A SOT23
Q606	D-2140017002	TR 40V 0.2A SOT23
Q607	D-2140018001	TR 40V 0.2A SOT23
<b>OTHER</b>		
SG-2	D-0921220017	SPARK GAP 1200VDC +-500V TP
SG-3	D-0921220017	SPARK GAP 1200VDC +-500V TP
SG-4	D-0921220017	SPARK GAP 1200VDC +-500V TP
SG-1	D-0921415018	SPARK GAP 140V N TP
<b>RESISTOR</b>		
R619	D-0153222822	RES MOF 3W 2.2K J SMALL
<b>VR</b>		
VR601	D-0606111002	RES VR VERT 3K T
VR601	D-0606111004	RES VR VERT 3K T
VR601	D-0606111013	RES VR VERT 3K T
<b>TRANSISTOR</b>		
Q603	D-2120046001	TR 150V 0.3A T126
<b>IC</b>		
IC601	D-2530024004	IC VIDEO AMP 16 PIN
IC603	D-2610034107	IC MULTIPLEX/DEMUTIPLEX SO-16
IC602	D-2610072007	IC CMOS D F-F SO-14PIN
<b>OTHER</b>		
△	D-3020005700	SOCKET FOR CRT

△ SYMBOL NO.	PART NO.	DESCRIPTION
<b>CAPACITOR</b>		
C79	D-1403003407	CAP AL LD 10V 2.2KU M 12.5*20
C79	D-1403003408	CAP AL LD 10V 2.2KU M 12.5*20
C60	D-1432306705	CAP AL 16V 330U M 8*12.5 TP
C60	D-1432306707	CAP AL 16V 330U M 8*11.5 TP
C46	D-1695112910	CAP MM PC 63V .1U J TP5
<b>DIODE</b>		
ZD2	D-2030120816	DIO ZEN .5W 4.9-5.1V D35
<b>IC</b>		
IC11	D-2610049042	IC CMOS 2K EEPROM 8PIN
IC11	D-2610049642	IC CMOS 2K EEPROM 8PIN
<b>COIL</b>		
L3	D-2922060104	PEAKING COIL 47uH K TP AXIAL
L3	D-2922060106	COIL PEAKING 47uH K TP
L9	D-2922280004	PEAKING COIL 100uH K TP AXIAL
L9	D-2922280006	PEAKING COIL 100uH K TP AXIAL
L9	D-2922280007	PEAKING COIL 100uH K
L9	D-2922280008	COIL PEAKING 100U K
<b>RESISTOR</b>		
R100	D-0313220001	RES CH 1/4W 22 J 1206
R100	D-0313220002	RES CH 1/4W 22 J 1206
R100	D-0313220004	RES CH 1/4W 22 J 1206
R114	D-0340000101	RES CH 1/10W 0 J 0805
R114	D-0340000102	RES CH 1/10W 0 0805
R114	D-0340000104	RES CH 1/10W 0 0805
R97	D-0341341101	RES CH 1/10W 3.65K F 0805
R97	D-0341341102	RES CH 1/10W 3.65K F 0805
R97	D-0341341104	RES CH 1/10W 3.65K F 0805
R98	D-0341426101	RES CH 1/10W 220K F 0805
R98	D-0341426104	RES CH 1/10W 220K F 0805
R241	D-0343101101	RES CH 1/10W 100 J 0805
R242	D-0343101101	RES CH 1/10W 100 J 0805
R286	D-0343101101	RES CH 1/10W 100 J 0805
R241	D-0343101102	RES CH 1/10W 100 J 0805
R242	D-0343101102	RES CH 1/10W 100 J 0805
R286	D-0343101102	RES CH 1/10W 100 J 0805
R241	D-0343101104	RES CH 1/10W 100 J 0805
R242	D-0343101104	RES CH 1/10W 100 J 0805
R286	D-0343101104	RES CH 1/10W 100 J 0805
R238	D-0343102101	RES CH 1/10W 1K J 0805
R247	D-0343102101	RES CH 1/10W 1K J 0805
R273	D-0343102101	RES CH 1/10W 1K J 0805
R274	D-0343102101	RES CH 1/10W 1K J 0805
R276	D-0343102101	RES CH 1/10W 1K J 0805
R28	D-0343102101	RES CH 1/10W 1K J 0805
R280	D-0343102101	RES CH 1/10W 1K J 0805
R281	D-0343102101	RES CH 1/10W 1K J 0805
R282	D-0343102101	RES CH 1/10W 1K J 0805
R284	D-0343102101	RES CH 1/10W 1K J 0805
R285	D-0343102101	RES CH 1/10W 1K J 0805
R38	D-0343102101	RES CH 1/10W 1K J 0805
R39	D-0343102101	RES CH 1/10W 1K J 0805
R49	D-0343102101	RES CH 1/10W 1K J 0805
R77	D-0343102101	RES CH 1/10W 1K J 0805
R238	D-0343102102	RES CH 1/10W 1K J 0805
R247	D-0343102102	RES CH 1/10W 1K J 0805
R273	D-0343102102	RES CH 1/10W 1K J 0805
R274	D-0343102102	RES CH 1/10W 1K J 0805
R276	D-0343102102	RES CH 1/10W 1K J 0805
R28	D-0343102102	RES CH 1/10W 1K J 0805
R280	D-0343102102	RES CH 1/10W 1K J 0805
R281	D-0343102102	RES CH 1/10W 1K J 0805
R282	D-0343102102	RES CH 1/10W 1K J 0805
R284	D-0343102102	RES CH 1/10W 1K J 0805
R285	D-0343102102	RES CH 1/10W 1K J 0805
R38	D-0343102102	RES CH 1/10W 1K J 0805
R39	D-0343102102	RES CH 1/10W 1K J 0805
R49	D-0343102102	RES CH 1/10W 1K J 0805
R77	D-0343102102	RES CH 1/10W 1K J 0805
R238	D-0343102104	RES CH 1/10W 1K J 0805
R247	D-0343102104	RES CH 1/10W 1K J 0805
R273	D-0343102104	RES CH 1/10W 1K J 0805

No. 51584

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
	RESISTOR				RESISTOR		
R261	D-0343222104		RES CH 1/10W 2.2K J 0805	R48	D-0343432101		RES CH 1/10W 4.3K J 0805
R264	D-0343222104		RES CH 1/10W 2.2K J 0805	R48	D-0343432102		RES CH 1/10W 4.3K J 0805
R267	D-0343222104		RES CH 1/10W 2.2K J 0805	R48	D-0343432104		RES CH 1/10W 4.3K J 0805
R104	D-0343223101		RES CH 1/10W 22K J 0805	R117	D-0343472101		RES CH 1/10W 4.7K J 0805
R122	D-0343223101		RES CH 1/10W 22K J 0805	R16	D-0343472101		RES CH 1/10W 4.7K J 0805
R123	D-0343223101		RES CH 1/10W 22K J 0805	R18	D-0343472101		RES CH 1/10W 4.7K J 0805
R124	D-0343223101		RES CH 1/10W 22K J 0805	R206	D-0343472101		RES CH 1/10W 4.7K J 0805
R204	D-0343223101		RES CH 1/10W 22K J 0805	R287	D-0343472101		RES CH 1/10W 4.7K J 0805
R42	D-0343223101		RES CH 1/10W 22K J 0805	R288	D-0343472101		RES CH 1/10W 4.7K J 0805
R104	D-0343223102		RES CH 1/10W 22K J 0805	R289	D-0343472101		RES CH 1/10W 4.7K J 0805
R122	D-0343223102		RES CH 1/10W 22K J 0805	R34	D-0343472101		RES CH 1/10W 4.7K J 0805
R123	D-0343223102		RES CH 1/10W 22K J 0805	R36	D-0343472101		RES CH 1/10W 4.7K J 0805
R124	D-0343223102		RES CH 1/10W 22K J 0805	R43	D-0343472101		RES CH 1/10W 4.7K J 0805
R204	D-0343223102		RES CH 1/10W 22K J 0805	R117	D-0343472102		RES CH 1/10W 4.7K J 0805
R42	D-0343223102		RES CH 1/10W 22K J 0805	R16	D-0343472102		RES CH 1/10W 4.7K J 0805
R104	D-0343223104		RES CH 1/10W 22K J 0805	R18	D-0343472102		RES CH 1/10W 4.7K J 0805
R122	D-0343223104		RES CH 1/10W 22K J 0805	R206	D-0343472102		RES CH 1/10W 4.7K J 0805
R123	D-0343223104		RES CH 1/10W 22K J 0805	R287	D-0343472102		RES CH 1/10W 4.7K J 0805
R124	D-0343223104		RES CH 1/10W 22K J 0805	R288	D-0343472102		RES CH 1/10W 4.7K J 0805
R204	D-0343223104		RES CH 1/10W 22K J 0805	R289	D-0343472102		RES CH 1/10W 4.7K J 0805
R42	D-0343223104		RES CH 1/10W 22K J 0805	R34	D-0343472102		RES CH 1/10W 4.7K J 0805
R19	D-0343243101		RES CH 1/10W 24K J 0805	R36	D-0343472102		RES CH 1/10W 4.7K J 0805
R19	D-0343243102		RES CH 1/10W 24K J 0805	R43	D-0343472102		RES CH 1/10W 4.7K J 0805
R19	D-0343243104		RES CH 1/10W 24K J 0805	R117	D-0343472104		RES CH 1/10W 4.7K J 0805
R23	D-0343244101		RES CH 1/10W 240K J 0805	R16	D-0343472104		RES CH 1/10W 4.7K J 0805
R250	D-0343244101		RES CH 1/10W 240K J 0805	R18	D-0343472104		RES CH 1/10W 4.7K J 0805
R23	D-0343244102		RES CH 1/10W 240K J 0805	R206	D-0343472104		RES CH 1/10W 4.7K J 0805
R250	D-0343244102		RES CH 1/10W 240K J 0805	R287	D-0343472104		RES CH 1/10W 4.7K J 0805
R23	D-0343244104		RES CH 1/10W 240K J 0805	R288	D-0343472104		RES CH 1/10W 4.7K J 0805
R250	D-0343244104		RES CH 1/10W 240K J 0805	R289	D-0343472104		RES CH 1/10W 4.7K J 0805
R1	D-0343271101		RES CH 1/10W 270 J 0805	R34	D-0343472104		RES CH 1/10W 4.7K J 0805
R1	D-0343271102		RES CH 1/10W 270 J 0805	R36	D-0343472104		RES CH 1/10W 4.7K J 0805
R1	D-0343271104		RES CH 1/10W 270 J 0805	R43	D-0343472104		RES CH 1/10W 4.7K J 0805
R30	D-0343272101		RES CH 1/10W 2.7K J 0805	R101	D-0343473101		RES CH 1/10W 47K J 0805
R30	D-0343272102		RES CH 1/10W 2.7K J 0805	R29	D-0343473101		RES CH 1/10W 47K J 0805
R30	D-0343272104		RES CH 1/10W 2.7K J 0805	R74	D-0343473101		RES CH 1/10W 47K J 0805
R37	D-0343273101		RES CH 1/10W 27K J 0805	R90	D-0343473101		RES CH 1/10W 47K J 0805
R71	D-0343273101		RES CH 1/10W 27K J 0805	R96	D-0343473101		RES CH 1/10W 47K J 0805
R37	D-0343273102		RES CH 1/10W 27K J 0805	R101	D-0343473102		RES CH 1/10W 47K J 0805
R71	D-0343273102		RES CH 1/10W 27K J 0805	R29	D-0343473102		RES CH 1/10W 47K J 0805
R37	D-0343273104		RES CH 1/10W 27K J 0805	R74	D-0343473102		RES CH 1/10W 47K J 0805
R71	D-0343273104		RES CH 1/10W 27K J 0805	R90	D-0343473102		RES CH 1/10W 47K J 0805
R66	D-0343303101		RES CH 1/10W 30K J 0805	R96	D-0343473102		RES CH 1/10W 47K J 0805
R72	D-0343303101		RES CH 1/10W 30K J 0805	R101	D-0343473104		RES CH 1/10W 47K J 0805
R66	D-0343303102		RES CH 1/10W 30K J 0805	R29	D-0343473104		RES CH 1/10W 47K J 0805
R72	D-0343303102		RES CH 1/10W 30K J 0805	R74	D-0343473104		RES CH 1/10W 47K J 0805
R66	D-0343303104		RES CH 1/10W 30K J 0805	R90	D-0343473104		RES CH 1/10W 47K J 0805
R72	D-0343303104		RES CH 1/10W 30K J 0805	R96	D-0343473104		RES CH 1/10W 47K J 0805
R21	D-0343331101		RES CH 1/10W 330 J 0805	R8	D-0343511101		RES CH 1/10W 510 J 0805
R67	D-0343331101		RES CH 1/10W 330 J 0805	R8	D-0343511102		RES CH 1/10W 510 J 0805
R78	D-0343331101		RES CH 1/10W 330 J 0805	R8	D-0343511104		RES CH 1/10W 510 J 0805
R21	D-0343331102		RES CH 1/10W 330 J 0805	R51	D-0343512101		RES CH 1/10W 5.1K J 0805
R67	D-0343331102		RES CH 1/10W 330 J 0805	R52	D-0343512101		RES CH 1/10W 5.1K J 0805
R78	D-0343331102		RES CH 1/10W 330 J 0805	R51	D-0343512102		RES CH 1/10W 5.1K J 0805
R21	D-0343331104		RES CH 1/10W 330 J 0805	R52	D-0343512102		RES CH 1/10W 5.1K J 0805
R67	D-0343331104		RES CH 1/10W 330 J 0805	R51	D-0343512104		RES CH 1/10W 5.1K J 0805
R78	D-0343331104		RES CH 1/10W 330 J 0805	R52	D-0343512104		RES CH 1/10W 5.1K J 0805
R7	D-0343332101		RES CH 1/10W 3.3K J 0805	R14	D-0343561101		RES CH 1/10W 560 J 0805
R7	D-0343332102		RES CH 1/10W 3.3K J 0805	R14	D-0343561102		RES CH 1/10W 560 J 0805
R7	D-0343332104		RES CH 1/10W 3.3K J 0805	R14	D-0343561104		RES CH 1/10W 560 J 0805
R275	D-0343333101		RES CH 1/10W 33K J 0805	R20	D-0343563102		RES CH 1/10W 56K J 0805
R283	D-0343333101		RES CH 1/10W 33K J 0805	R20	D-0343563104		RES CH 1/10W 56K J 0805
R55	D-0343333101		RES CH 1/10W 33K J 0805	R62	D-0343565101		RES CH 1/10W 5.6M J 0805
R275	D-0343333102		RES CH 1/10W 33K J 0805	R62	D-0343565104		RES CH 1/10W 5.6M J 0805
R283	D-0343333102		RES CH 1/10W 33K J 0805	R26	D-0343684101		RES CH 1/10W 680K J 0805
R55	D-0343333102		RES CH 1/10W 33K J 0805	R26	D-0343684102		RES CH 1/10W 680K J 0805
R275	D-0343333104		RES CH 1/10W 33K J 0805	R26	D-0343684104		RES CH 1/10W 680K J 0805
R283	D-0343333104		RES CH 1/10W 33K J 0805	R12	D-0343750101		RES CH 1/10W 75 J 0805
R55	D-0343333104		RES CH 1/10W 33K J 0805	R13	D-0343750101		RES CH 1/10W 75 J 0805
R115	D-0343391101		RES CH 1/10W 390 J 0805	R15	D-0343750101		RES CH 1/10W 75 J 0805
R116	D-0343391101		RES CH 1/10W 390 J 0805	R3	D-0343750101		RES CH 1/10W 75 J 0805
R115	D-0343391102		RES CH 1/10W 390 J 0805	R4	D-0343750101		RES CH 1/10W 75 J 0805
R116	D-0343391102		RES CH 1/10W 390 J 0805	R9	D-0343750101		RES CH 1/10W 75 J 0805
R115	D-0343391104		RES CH 1/10W 390 J 0805	R12	D-0343750102		RES CH 1/10W 75J 0805
R116	D-0343391104		RES CH 1/10W 390 J 0805	R13	D-0343750102		RES CH 1/10W 75J 0805

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>				<b>CAPACITOR</b>			
R15	D-0343750102		RES CH 1/10W 75J 0805	C53	D-1511544103		CAP MC CP 50V 680P J COG 0805
R3	D-0343750102		RES CH 1/10W 75J 0805	C59	D-1511544103		CAP MC CP 50V 680P J COG 0805
R4	D-0343750102		RES CH 1/10W 75J 0805	C53	D-1511544109		CAP MC CP 50V 680P J COG 0805
R9	D-0343750102		RES CH 1/10W 75J 0805	C59	D-1511544109		CAP MC CP 50V 680P J COG 0805
R12	D-0343750104		RES CH 1/10W 75 J 0805	C220	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R13	D-0343750104		RES CH 1/10W 75 J 0805	C221	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R15	D-0343750104		RES CH 1/10W 75 J 0805	C222	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R3	D-0343750104		RES CH 1/10W 75 J 0805	C37	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R4	D-0343750104		RES CH 1/10W 75 J 0805	C48	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R9	D-0343750104		RES CH 1/10W 75 J 0805	C89	D-1512445102		CAP MC CP 50V 1KP K X7R 0805
R17	D-0343752101		RES CH 1/10W 7.5K J 0805	C220	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R17	D-0343752102		RES CH 1/10W 7.5K J 0805	C221	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R17	D-0343752104		RES CH 1/10W 7.5K J 0805	C222	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R27	D-0343753101		RES CH 1/10W 75K J 0805	C37	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R27	D-0343753102		RES CH 1/10W 75K J 0805	C48	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R27	D-0343753104		RES CH 1/10W 75K J 0805	C89	D-1512445103		CAP MC CP 50V 1KP K X7R 0805
R112	D-0343820101		RES CH 1/10W 82 J 0805	C220	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R6	D-0343820101		RES CH 1/10W 82 J 0805	C221	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R112	D-0343820102		RES CH 1/10W 82 J 0805	C222	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R6	D-0343820102		RES CH 1/10W 82 J 0805	C37	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R112	D-0343820104		RES CH 1/10W 82 J 0805	C48	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R6	D-0343820104		RES CH 1/10W 82 J 0805	C89	D-1512445109		CAP MC CP 50V 1KP K X7R 0805
R80	D-0343824101		RES CH 1/10W 820K J 0805	C73	D-1512446102		CAP MC CP 50V 2.2KP K X7R 0805
R80	D-0343824104		RES CH 1/10W 820K J 0805	C73	D-1512446103		CAP MC CP 50V 2.2KP K X7R 0805
R10	D-0343911101		RES CH 1/10W 910 J 0805	C73	D-1512446109		CAP MC CP 50V 2.2KP K X7R 0805
R10	D-0343911102		RES CH 1/10W 910 J 0805	C57	D-1512449102		CAP MC CP 50V 4.7KP K X7R 0805
R10	D-0343911104		RES CH 1/10W 910 J 0805	C61	D-1512449102		CAP MC CP 50V 4.7KP K X7R 0805
R50	D-0343912101		RES CH 1/10W 9.1K J 0805	C93	D-1512449102		CAP MC CP 50V 4.7KP K X7R 0805
R50	D-0343912102		RES CH 1/10W 9.1K J 0805	C57	D-1512449103		CAP MC CP 50V 4.7KP K X7R 0805
R50	D-0343912104		RES CH 1/10W 9.1K J 0805	C61	D-1512449103		CAP MC CP 50V 4.7KP K X7R 0805
R25A	D-0345085111		RES CH 1/10W 91K D 0805	C93	D-1512449103		CAP MC CP 50V 4.7KP K X7R 0805
R25	D-0345104111		RES CH 1/10W 470K D 0805	C57	D-1512449109		CAP MC CP 50V 4.7KP K X7R 0805
RP1	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C61	D-1512449109		CAP MC CP 50V 4.7KP K X7R 0805
RP10	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C93	D-1512449109		CAP MC CP 50V 4.7KP K X7R 0805
RP11	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C100	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP12	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C15	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP2	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C17	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP3	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C18	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP4	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C21	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP5	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C22	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP6	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C23	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP7	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C24	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP8	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C25	D-1512454102		CAP MC CP 50V .01U K X7R 0805
RP9	D-0619900912		RES ARRAY 220 J SMD4*2 3.2*1.6	C26	D-1512454102		CAP MC CP 50V .01U K X7R 0805
<b>CAPACITOR</b>				C27	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C45	D-1483803318		CAP AL CP 10V 220U M 10.1*4.6*	C30	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C56	D-1483803318		CAP AL CP 10V 220U M 10.1*4.6*	C31	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C258	D-1493209018		CAP AL CP 25V 10U M 6.3*3.6*3	C32	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C70	D-1493215018		CAP AL CP 50V 1U M 6.3*3.6*3	C33	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C224	D-1493215518		CAP AL CP 50V 2.2U M 6.3*3.6*3	C34	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C55	D-1493215518		CAP AL CP 50V 2.2U M 6.3*3.6*3	C35	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C62	D-1493215518		CAP AL CP 50V 2.2U M 6.3*3.6*3	C39	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C20	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4	C40	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C94	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4	C41	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C63	D-1493807318		CAP AL CP 16V 100U M 10.1*4.6*	C67	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C7	D-1493807318		CAP AL CP 16V 100U M 10.1*4.6*	C68	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C47	D-1511512102		CAP MC CP 50V 18P J COG 0805	C69	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C58	D-1511512102		CAP MC CP 50V 18P J COG 0805	C81	D-1512454102		CAP MC CP 50V .01U K X7R 0805
C227	D-1511514102		CAP MC CP 50V 22P J COG 0805	C100	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C228	D-1511514102		CAP MC CP 50V 22P J COG 0805	C15	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C227	D-1511514103		CAP MC CP 50V 22P J COG 0805	C17	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C228	D-1511514103		CAP MC CP 50V 22P J COG 0805	C18	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C227	D-1511514109		CAP MC CP 50V 22P J COG 0805	C21	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C228	D-1511514109		CAP MC CP 50V 22P J COG 0805	C22	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C223	D-1511530102		CAP MC CP 50V 100P J COG 0805	C23	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C230	D-1511530102		CAP MC CP 50V 100P J COG 0805	C24	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C223	D-1511530103		CAP MC CP 50V 100P J COG 0805	C25	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C230	D-1511530103		CAP MC CP 50V 100P J COG 0805	C26	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C223	D-1511530109		CAP MC CP 50V 100P J COG 0805	C27	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C230	D-1511530109		CAP MC CP 50V 100P J COG 0805	C30	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C88	D-1511540102		CAP MC CP 50V 330P J COG 0805	C31	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C88	D-1511540103		CAP MC CP 50V 330P J COG 0805	C32	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C88	D-1511540109		CAP MC CP 50V 330P J COG 0805	C33	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C53	D-1511544102		CAP MC CP 50V 680P J COG 0805	C34	D-1512454103		CAP MC CP 50V .01U K X7R 0805
C59	D-1511544102		CAP MC CP 50V 680P J COG 0805	C35	D-1512454103		CAP MC CP 50V .01U K X7R 0805



[illegible]

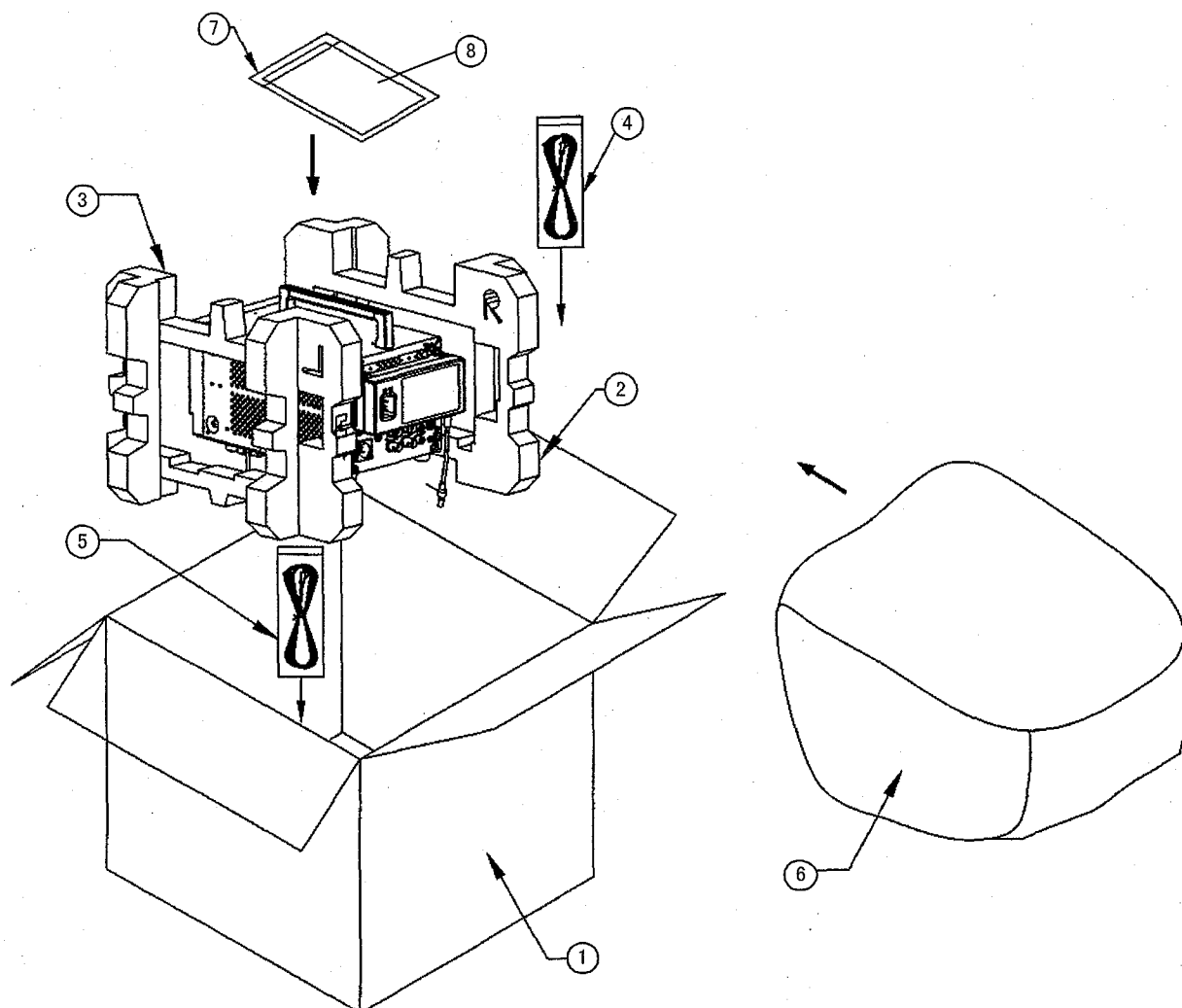
△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>CAPACITOR</b>				<b>IC</b>			
C90	D-1512458109		CAP MC CP 50V .1U K X7R 0805	IC1	D-2500005301		IC REGU 5V 0.1A SO-8 PIN
C92	D-1512458109		CAP MC CP 50V .1U K X7R 0805	IC1	D-2500005303		IC REGU 5V 0.1A SO-8 PIN
C98	D-1512458109		CAP MC CP 50V .1U K X7R 0805	IC1	D-2500005305		IC REGU 5V 0.1A SO-8 PIN
C99	D-1512458109		CAP MC CP 50V .1U K X7R 0805	IC2	D-2510055014		IC PLL SO-14PIN
C442	D-1512466102		CAP MC CP 50V .033U K X7R 0805	IC3	D-2530057016		IC RGB 6BIT AD CONVERTER
C442	D-1512466103		CAP MC CP 50V .033U K X7R 0805	IC4	D-2530058065		IC COLOR SEQUENTIAL 113PIN SMD
C442	D-1512466109		CAP MC CP 50V .033U K X7R 0805	IC20	D-2600019309		IC EXCLUSIVE OR SO-14PIN
C19	D-1512482102		CAP MC CP 50V .068U K X7R 0805	IC20	D-2600019311		IC EXCLUSIVE OR SO-14PIN
C252	D-1512482102		CAP MC CP 50V .068U K X7R 0805	IC19	D-2600031511		IC MONOSTABLE SO-16
C19	D-1512482103		CAP MC CP 50V .068U K X7R 0805	IC10	D-2600056234		IC CMOS MULTIPLEXER SOL16 P-15
C252	D-1512482103		CAP MC CP 50V .068U K X7R 0805	IC12	D-2610040111		IC D F-F SO-14
C19	D-1512482109		CAP MC CP 50V .068U K X7R 0805	IC18	D-2610040111		IC D F-F SO-14
C252	D-1512482109		CAP MC CP 50V .068U K X7R 0805	IC8	D-2610040111		IC D F-F SO-14
C5	D-1543664102		CAP MC CP 16V .47U M Y5V 0805	IC7	D-2610060207		IC PLL SO-16
C5	D-1543664109		CAP MC CP 16V .47U M Y5V 0805	IC15	D-2610107011		IC MONOSTABLE MULT SOIC-16
C65	D-1557647102		CAP MC CP 25V .33U Z Y5V 0805	IC5	D-2610398020		IC 512K*16 SOJ-40P 40nS
<b>DIODE</b>				IC6	D-2610398020		IC 512K*16 SOJ-40P 40nS
D11	D-2040010201		DIO SW 0.2A 75V MELF	<b>COIL</b>			
D2	D-2040010201		DIO SW 0.2A 75V MELF	L1	D-2921111322		CORE BEAD 1206 SMD
D3	D-2040010201		DIO SW 0.2A 75V MELF	L10	D-2921111322		CORE BEAD 1206 SMD
D4	D-2040010201		DIO SW 0.2A 75V MELF	L12	D-2921111322		CORE BEAD 1206 SMD
D5	D-2040010201		DIO SW 0.2A 75V MELF	L16	D-2921111322		CORE BEAD 1206 SMD
D7	D-2040010201		DIO SW 0.2A 75V MELF	L17	D-2921111322		CORE BEAD 1206 SMD
D8	D-2040010201		DIO SW 0.2A 75V MELF	L18	D-2921111322		CORE BEAD 1206 SMD
D9	D-2040010201		DIO SW 0.2A 75V MELF	L19	D-2921111322		CORE BEAD 1206 SMD
D11	D-2040010202		DIO SW 0.2A 75V MELF	L2	D-2921111322		CORE BEAD 1206 SMD
D2	D-2040010202		DIO SW 0.2A 75V MELF	L20	D-2921111322		CORE BEAD 1206 SMD
D3	D-2040010202		DIO SW 0.2A 75V MELF	L21	D-2921111322		CORE BEAD 1206 SMD
D4	D-2040010202		DIO SW 0.2A 75V MELF	L22	D-2921111322		CORE BEAD 1206 SMD
D5	D-2040010202		DIO SW 0.2A 75V MELF	L23	D-2921111322		CORE BEAD 1206 SMD
D7	D-2040010202		DIO SW 0.2A 75V MELF	L4	D-2921111322		CORE BEAD 1206 SMD
D8	D-2040010202		DIO SW 0.2A 75V MELF	L5	D-2921111322		CORE BEAD 1206 SMD
D9	D-2040010202		DIO SW 0.2A 75V MELF	L6	D-2921111322		CORE BEAD 1206 SMD
D11	D-2040010203		DIO SW .3A 75V MELF	L8	D-2921111322		CORE BEAD 1206 SMD
D2	D-2040010203		DIO SW .3A 75V MELF	<b>RESISTOR</b>			
D3	D-2040010203		DIO SW .3A 75V MELF	R99	D-0133479810		RES MOF 1W .47 J SMALL
D4	D-2040010203		DIO SW .3A 75V MELF	R99	D-0133479822		RES MOF 1W .47 J SMALL
D5	D-2040010203		DIO SW .3A 75V MELF	R417	D-0143220803		RES MOF 2W 22 J SMALL
D7	D-2040010203		DIO SW .3A 75V MELF	<b>CAPACITOR</b>			
D8	D-2040010203		DIO SW .3A 75V MELF	C28	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D9	D-2040010203		DIO SW .3A 75V MELF	C29	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D11	D-2040010204		DIO SW 0.2A 75V LL-34	C4	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D2	D-2040010204		DIO SW 0.2A 75V LL-34	C6	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D3	D-2040010204		DIO SW 0.2A 75V LL-34	C8	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D4	D-2040010204		DIO SW 0.2A 75V LL-34	C91	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D5	D-2040010204		DIO SW 0.2A 75V LL-34	C97	D-1493507118		CAP AL CP 16V 47U M 7.1*4.6*4.
D7	D-2040010204		DIO SW 0.2A 75V LL-34	<b>IC</b>			
D8	D-2040010204		DIO SW 0.2A 75V LL-34	IC16	D-2510092147		IC BASEBAND DELAY LINE DIP-16
D9	D-2040010204		DIO SW 0.2A 75V LL-34	IC13	D-2530059016		IC 1W BTL MONO AUDIO AMP 8DIP
<b>TRANSISTOR</b>				IC14	D-2540156016		IC PAL & PAL/NTSC TV 52DIP
Q1	D-2140017001		TR 40V 0.2A SOT23	IC11	D-2610049412		IC SERIAL 256*8 EEPROM 8PIN
Q10	D-2140017001		TR 40V 0.2A SOT23	IC9	D-2610404134		IC CMOS 8-BIT SDIP42-P-600-1.7
Q11	D-2140017001		TR 40V 0.2A SOT23	<b>OTHER</b>			
Q12	D-2140017001		TR 40V 0.2A SOT23	X3	D-0730240212		CRYSTAL 8MHZ 30PPM 30PF
Q13	D-2140017001		TR 40V 0.2A SOT23	X2	D-0730270412		CRYSTALS 4.433619MHZ 30PPM
Q14	D-2140017001		TR 40V 0.2A SOT23	X1	D-0730320112		CRYSTAL 3.57 9545MHZ 50PPM
Q15	D-2140017001		TR 40V 0.2A SOT23	X4	D-2909901211		FILTER 6.75MHZ 25DB-60DB
Q4	D-2140017001		TR 40V 0.2A SOT23		D-3020002200		IC SOCKET 8PIN .3CC
Q7	D-2140017001		TR 40V 0.2A SOT23				
Q9	D-2140017001		TR 40V 0.2A SOT23				
Q5	D-2140043506		TR 50V .1A SC-59				
Q6	D-2140043506		TR 50V .1A SC-59				
Q8	D-2140043506		TR 50V .1A SC-59				

## MAIN P.W.BOARD ASS'Y (D-5600098001)

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
<b>RESISTOR</b>				<b>RESISTOR</b>			
	R415	D-0123339822	RES MOF 1/2W .33 J SMALL		R510	D-0313228001	RES CH 1/4W 2.2 J 1206
<b>CAPACITOR</b>					R515	D-0313228001	RES CH 1/4W 2.2 J 1206
	C422	D-1403022028	CAP AL LD 100V 22U M 8*11.5		R516	D-0313228001	RES CH 1/4W 2.2 J 1206
	C413	D-1410715005	CAP AL 50V 1u M 4*7		R510	D-0313228004	RES CH 1/4W 2.2 J 1206
	C413	D-1410715007	CAP AL 50V 1U M 4*7 TP2.5		R515	D-0313228004	RES CH 1/4W 2.2 J 1206
	C413	D-1410715009	CAP AL 50V 1U M 4*7 TP2.5		R516	D-0313228004	RES CH 1/4W 2.2 J 1206
	C401	D-1432309105	CAP AL 25V 100U M 6.3*11 TP		R440	D-0323122601	RES CH 1/2W 1.2K J 2010
	C401	D-1432309107	CAP AL 25V 100U M 6.3*11 TP		R440	D-0323122602	RES CH 1/2W 1.2K J 2010
	C426	D-1432309305	CAP AL 25V 220U M 8*12.5 TP		R440	D-0323122604	RES CH 1/2W 1.2K J 2010
	C438	D-1432309305	CAP AL 25V 220U M 8*12.5 TP		R442	D-0323128601	RES CH 1/2W 1.2 J 2010
	C439	D-1432309305	CAP AL 25V 220U M 8*12.5 TP		R413	D-0323242601	RES CH 1/2W 2.4K J 2010
	C426	D-1432309307	CAP AL 25V 220U M 8*11.5 TP		R413	D-0323242602	RES CH 1/2W 2.4K J 2010
	C438	D-1432309307	CAP AL 25V 220U M 8*11.5 TP		R413	D-0323242604	RES CH 1/2W 2.4K J 2010
	C439	D-1432309307	CAP AL 25V 220U M 8*11.5 TP		R512	D-0323271601	RES CH 1/2W 270 J 2010
	C904	D-1432309505	CAP AL 25V 47U M 5*11.5 TP		R512	D-0323271602	RES CH 1/2W 270 J 2010
	C904	D-1432309507	CAP AL 25V 47U M 5*11 TP		R512	D-0323271604	RES CH 1/2W 270 J 2010
	C425	D-1432309605	CAP AL 25V 470U M 10*16 TP		R511	D-0341046101	RES CH 1/10W 2.4K F 0805
	C434	D-1432309605	CAP AL 25V 470U M 10*16 TP		R511	D-0341046102	RES CH 1/10W 2.4K F 0805
	C425	D-1432309607	CAP AL 25V 470U M 10*16 TP		R511	D-0341046104	RES CH 1/10W 2.4K F 0805
	C434	D-1432309607	CAP AL 25V 470U M 10*16 TP		R514	D-0341048101	RES CH 1/10W 3.3K F 0805
	C407	D-1432315005	CAP AL 50V 1U M 5*11 TP		R514	D-0341048102	RES CH 1/10W 3.3K F 0805
	C410	D-1432315005	CAP AL 50V 1U M 5*11 TP		R514	D-0341048104	RES CH 1/10W 3.3K F 0805
	C416	D-1432315005	CAP AL 50V 1U M 5*11 TP		R401	D-0341049101	RES CH 1/10W 3.32K F 0805
	C407	D-1432315007	CAP AL 50V 1U M 5*11 TP		R401	D-0341049102	RES CH 1/10W 3.32K F 0805
	C410	D-1432315007	CAP AL 50V 1U M 5*11 TP		R401	D-0341049104	RES CH 1/10W 3.32K F 0805
	C416	D-1432315007	CAP AL 50V 1U M 5*11 TP		R405	D-0341497101	RES CH 1/10W 3.09K F 0805
	C511	D-1432317005	CAP AL 50V 3.3U M 5*11 TP		R405	D-0341497104	RES CH 1/10W 3.09K F 0805
	C511	D-1432317007	CAP AL 50V 3.3U M 5*11 TP		R906	D-0343100101	RES CH 1/10W 10 J 0805
	C419	D-1432321705	CAP AL 100V 10U M 6.3*11 TP		R907	D-0343100101	RES CH 1/10W 10 J 0805
	C419	D-1432321707	CAP AL 100V 10U M 6.3*11 TP		R908	D-0343100101	RES CH 1/10W 10 J 0805
	C402	D-1850125201	CAP PP DP 50V 1KP J TP5		R909	D-0343100101	RES CH 1/10W 10 J 0805
	C402	D-1850125206	CAP PP DP 50V 1KP J TP5		R910	D-0343100101	RES CH 1/10W 10 J 0805
	C417	D-1860406201	CAP PP DP 100V .01U G TP5		R911	D-0343100101	RES CH 1/10W 10 J 0805
	C405	D-1950103101	CAP MY DP 1 50V 5.6KP J TP5		R912	D-0343100101	RES CH 1/10W 10 J 0805
	C405	D-1950103104	CAP MY DP 1 50V 5.6KP J TP5		R906	D-0343100102	RES CH 1/10W 10 J 0805
	C404	D-1950201101	CAP MY DP 1 50V 2.2KP K TP5		R907	D-0343100102	RES CH 1/10W 10 J 0805
	C404	D-1950201104	CAP MY DP 1 50V 2.2KP K TP5		R908	D-0343100102	RES CH 1/10W 10 J 0805
	C509	D-1950212101	CAP MY DP 1 50V .1U K TP5		R909	D-0343100102	RES CH 1/10W 10 J 0805
	C509	D-1950212104	CAP MY DP 1 50V .1U K TP5		R910	D-0343100102	RES CH 1/10W 10 J 0805
	C406	D-1950219101	CAP MY DP 1 50V 3.3KP K TP5		R911	D-0343100102	RES CH 1/10W 10 J 0805
	C406	D-1950219104	CAP MY DP 1 50V 3.3KP K TP5		R912	D-0343100102	RES CH 1/10W 10 J 0805
<b>DIODE</b>					R906	D-0343100104	RES CH 1/10W 10 J 0805
	D409	D-2010011407	DIO FRD 1A 400V D41		R907	D-0343100104	RES CH 1/10W 10 J 0805
	D415	D-2010011407	DIO FRD 1A 400V D41		R908	D-0343100104	RES CH 1/10W 10 J 0805
	D406	D-2010101401	DIO FRD 1A 400V D41		R909	D-0343100104	RES CH 1/10W 10 J 0805
	D407	D-2010101401	DIO FRD 1A 400V D41		R910	D-0343100104	RES CH 1/10W 10 J 0805
	D401	D-2010992007	DIO FRD 1A 1000V		R911	D-0343100104	RES CH 1/10W 10 J 0805
	ZD402	D-2030020305	DIO ZEN 0.5W 4.94-5.20V LL-34		R912	D-0343100104	RES CH 1/10W 10 J 0805
	D414	D-2050011001	DIO SI 1A 100V D41		R407	D-0343102101	RES CH 1/10W 1K J 0805
	D502	D-2050011001	DIO SI 1A 100V D41		R423	D-0343102101	RES CH 1/10W 1K J 0805
	D414	D-2050011011	DIO SI 1A 100V D15		R428	D-0343102101	RES CH 1/10W 1K J 0805
	D502	D-2050011011	DIO SI 1A 100V D15		R505	D-0343102101	RES CH 1/10W 1K J 0805
<b>TRANSISTOR</b>					R903	D-0343102101	RES CH 1/10W 1K J 0805
	Q416	D-2100067006	TR 250V 50mA TO-92 hfe=50min		R407	D-0343102102	RES CH 1/10W 1K J 0805
<b>COIL</b>					R423	D-0343102102	RES CH 1/10W 1K J 0805
	L901	D-2921020100	CORE BEAD 3.5*1.2*6 T/R		R428	D-0343102102	RES CH 1/10W 1K J 0805
	L902	D-2921020100	CORE BEAD 3.5*1.2*6 T/R		R505	D-0343102102	RES CH 1/10W 1K J 0805
<b>RESISTOR</b>					R903	D-0343102102	RES CH 1/10W 1K J 0805
	R460	D-0313100001	RES CH 1/4W 10 J 1206		R407	D-0343102104	RES CH 1/10W 1K J 0805
	R460	D-0313100002	RES CH 1/4W 10 J 1206		R423	D-0343102104	RES CH 1/10W 1K J 0805
	R460	D-0313100004	RES CH 1/4W 10 J 1206		R428	D-0343102104	RES CH 1/10W 1K J 0805
	R465	D-0313102001	RES CH 1/4W 1K J 1206		R505	D-0343102104	RES CH 1/10W 1K J 0805
	R465	D-0313102002	RES CH 1/4W 1K J 1206		R903	D-0343102104	RES CH 1/10W 1K J 0805
	R465	D-0313102004	RES CH 1/4W 1K J 1206		R406	D-0343103101	RES CH 1/10W 10K J 0805
	R438	D-0313202001	RES CH 1/4W 2K J 1206		R424	D-0343103101	RES CH 1/10W 10K J 0805
	R439	D-0313202001	RES CH 1/4W 2K J 1206		R466	D-0343103101	RES CH 1/10W 10K J 0805
	R438	D-0313202002	RES CH 1/4W 2K J 1206		R470	D-0343103101	RES CH 1/10W 10K J 0805
	R439	D-0313202002	RES CH 1/4W 2K J 1206		R501	D-0343103101	RES CH 1/10W 10K J 0805
	R438	D-0313202004	RES CH 1/4W 2K J 1206		R502	D-0343103101	RES CH 1/10W 10K J 0805
	R439	D-0313202004	RES CH 1/4W 2K J 1206		R406	D-0343103102	RES CH 1/10W 10K J 0805
	R436	D-0313225002	RES CH 1/4W 2.2M J 1206		R424	D-0343103102	RES CH 1/10W 10K J 0805
	R444	D-0313225002	RES CH 1/4W 2.2M J 1206		R466	D-0343103102	RES CH 1/10W 10K J 0805
	R436	D-0313225004	RES CH 1/4W 2.2M J 1206		R470	D-0343103102	RES CH 1/10W 10K J 0805
	R444	D-0313225004	RES CH 1/4W 2.2M J 1206		R501	D-0343103102	RES CH 1/10W 10K J 0805

△	SYMBOL NO.	PART NO.	DESCRIPTION	△	SYMBOL NO.	PART NO.	DESCRIPTION
	VR				DIODE		
	VR403	D-0605118006	RES VR VERT 1/4W 5M M	△	D402	D-2010141607	DIO FRD 3A 600V DO-201 AD
	VR505	D-0606105004	RES VR VERT 500K T	△	D410	D-2010141607	DIO FRD 3A 600V DO-201 AD
	VR402	D-0606108002	RES VR VERT 100K T		D411	D-2010831407	DIO FRD 3A 400V D201
	VR501	D-0606108002	RES VR VERT 100K T		D413	D-2010831407	DIO FRD 3A 400V D201
	VR503	D-0606108002	RES VR VERT 100K T		TRANSISTOR		
	VR504	D-0606108002	RES VR VERT 100K T		Q412	D-2100070010	TR 60V 3A 2045
	VR502	D-0606110004	RES VR VERT 200K T	△	Q404	D-2120025001	TR 400V 8A T220
	VR401	D-0606203304	RES VR HORI 10K T KNOB	△	Q414	D-2120025001	TR 400V 8A T220
	VR404	D-0606205004	RES VR HORI 500K T KNOB		Q405	D-2120102007	TR 100V 2A T220
	CAPACITOR				Q413	D-2420023010	FET -55V -74A TO-220AB
	C408	D-1142354401	CAP CD 1KV .01U M Z5U K110		IC		
	C408	D-1142354403	CAP CD 1KV .01U M Z5U K110		IC403	D-2500005001	IC REGU 5V 1A T220 3PIN
	C444	D-1200041001	CAP MO DP 50V 390P J COG TP R		IC402	D-2500007001	IC REGU 12V 1.0A T220
	C444	D-1200041003	CAP MO DP 50V 390P J COG TP R		IC501	D-2530004001	IC VERT DEFLECTION 2A 15PIN
	C415	D-1401706827	CAP AL LD 16V 470U M 8*20		IC401	D-2530037005	IC TV HOVIZONTAL PROCESSOR 8P
	C429	D-1401706827	CAP AL LD 16V 470U M 8*20		IC903	D-2540098006	IC BRIDGE DRIVER 20PIN
	C415	D-1401706837	CAP AL LD 16V 470U M 8*20		IC904	D-2540098006	IC BRIDGE DRIVER 20PIN
	C429	D-1401706837	CAP AL LD 16V 470U M 8*20		IC902	D-2610139060	IC EPROM 64K*8 150ns 28P
	C411	D-1401709207	CAP AL LD 25V 1KU M 12.5*25		COIL		
	C428	D-1401709207	CAP AL LD 25V 1KU M 12.5*25		L401	D-2817000617	WIDTH COIL 8uH-35uH
	C510	D-1401709207	CAP AL LD 25V 1KU M 12.5*25	△	T403	D-2817301117	X'FMR DRIVE
	C411	D-1401709227	CAP AL LD 25V 1KU M 12.5*25	△	T402	D-2817306417	X'FMR SCAN CHOKE EI-25
	C428	D-1401709227	CAP AL LD 25V 1KU M 12.5*25		L402	D-2817600717	LINEAR COIL DR10*12 OA 4.5uH
	C510	D-1401709227	CAP AL LD 25V 1KU M 12.5*25		TRANSF		
	C411	D-1401709237	CAP AL LD 25V 1KU M 12.5*25	△	T401	D-2850002707	FLYBACK TRANSFORMER "5"
	C428	D-1401709237	CAP AL LD 25V 1KU M 12.5*25		OTHER		
	C510	D-1401709237	CAP AL LD 25V 1KU M 12.5*25	△		D-3000066500	POWER SWITCH POM94HM
	C504	D-1401709927	CAP AL LD 25V 330U M 8*20			D-3020000300	IC SOCKET 28PIN
	C504	D-1401709937	CAP AL LD 25V 330U M 8*20			D-3120035000	TRANSISTOR COVER
	C424	D-1401712407	CAP AL LD 35V 220U M 8*20			D-3240191000	BUSHING NYLON46 94V-0
	C424	D-1401712427	CAP AL LD 35V 220U M 8*20			D-3240191000	BUSHING NYLON46 94V-0
	C424	D-1401712437	CAP AL LD 35V 220U M 8*20				
	C418	D-1403021307	CAP AL LD 100V 100U M 12.5*20				
	C418	D-1403021328	CAP AL LD 100V 100U M 12.5*20				
	C505	D-1430809205	CAP AL 25V 1KU M 13*20				
	C505	D-1430809207	CAP AL 25V 1KU M 13*20				
	C435	D-1431809405	CAP AL 25V 2200uM 12.5*25				
	C435	D-1431809407	CAP AL 25V 2200U M 12.5*25				
	C903	D-1432309505	CAP AL 25V 47U M 5*11.5 TP				
	C414	D-1720112001	CAP MP DP 100V .1U J				
	C501	D-1720112001	CAP MP DP 100V .1U J				
	C502	D-1720112001	CAP MP DP 100V .1U J				
	C503	D-1720112001	CAP MP DP 100V .1U J				
	C507	D-1720112001	CAP MP DP 100V .1U J				
	C508	D-1720112001	CAP MP DP 100V .1U J				
	C421	D-1753157006	CAP MP DP 250V .82U J K120				
△	C423	D-1873106006	CAP PP DP 1KV .01U J K115				
△	C409	D-1873107006	CAP PP DP 1KV 0.015u J K115				

## PACKING



## PACKING PARTS LIST

REF. NO.	PART NO.	PART NAME	DESCRIPTION
1	D-3510313500	PACKING CASE	
2	D-3500045200	END BLOCK CUSHION-R	
3	D-3500045100	END BLOCK CUSHION-L	
4	D-3072003200	POWER CORD	
5	D-3080108900	POWER CORD	
6	D-3500904500	POLY BAG	FOR SET
7	D-3500904600	POLY BAG	
8	D-5011030900	INST BOOK	LCT0506-001A



# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

TM-L500PN



Printed in Japan  
VP 9912  
HK MH NN

# TM-L500PN STANDARD CIRCUIT DIAGRAM

## ■ NOTE ON USING CIRCUIT DIAGRAMS

### 1. SAFETY

The components identified by the  $\Delta$  symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

### 2. SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- |   |  |
|---|--|
| (1) Input signal  | : Color bar signal   |
| (2) Setting positions of each knob/button and variable resistor | : Original setting position when shipped   |
| (3) Internal resistance of tester                               | : DC 20k $\Omega$ /V   |
| (4) Oscilloscope sweeping time                                  | : H $\Rightarrow$ 20 $\mu$ S/div<br>: V $\Rightarrow$ 5mS/div<br>: Others $\Rightarrow$ Sweeping time is specified |
| (5) Voltage values  | : All DC voltage values  |
- \* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

### 3. INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R1209  $\rightarrow$  R209

### 4. INDICATIONS ON THE CIRCUIT DIAGRAM

#### (1) Resistors

##### ● Resistance value

- |         |                 |
|---------|-----------------|
| No unit | : [ $\Omega$ ]  |
| K       | : [K $\Omega$ ] |
| M       | : [M $\Omega$ ] |

##### ● Rated allowable power

- |               |                |
|---------------|----------------|
| No indication | : 1/10[W]      |
| Others        | : As specified |

##### ● Type

- |               |                             |
|---------------|-----------------------------|
| No indication | : Carbon resistor           |
| OMR           | : Oxide metal film resistor |
| MFR           | : Metal film resistor       |
| MPR           | : Metal plate resistor      |
| UNFR          | : Uninflamable resistor     |
| FR            | : Fusible resistor          |

\* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

#### (2) Capacitors

##### ● Capacitance value

- |             |              |
|-------------|--------------|
| 1 or higher | : [pF]       |
| less than 1 | : [ $\mu$ F] |

##### ● Withstand voltage

- |               |                            |
|---------------|----------------------------|
| No indication | : DC50[V]                  |
| AC indicated  | : AC withstand voltage [V] |
| Others        | : DC withstand voltage [V] |

##### \* Electrolytic Capacitors

47/50 [Example]: Capacitance value [ $\mu$ F]/withstand voltage [V]

##### ● Type

- |               |                                     |
|---------------|-------------------------------------|
| No indication | : Ceramic capacitor                 |
| MY            | : Mylar capacitor                   |
| MM            | : Metalized mylar capacitor         |
| PP            | : Polypropylene capacitor           |
| MPP           | : Metalized polypropylene capacitor |
| MF            | : Metalized film capacitor          |
| TF            | : Thin film capacitor               |
| BP            | : Bipolar electrolytic capacitor    |
| TAN           | : Tantalum capacitor                |

##### (3) Coils

- |         |                |
|---------|----------------|
| No unit | : [ $\mu$ H]   |
| Others  | : As specified |

##### (4) Power Supply

- |  |       |
|--|-------|
|  | : B1  |
|  | : 12V |
|  | : 9V  |
|  | : 5V  |

\* Respective voltage values are indicated

##### (5) Test point

- |  |                           |
|--|---------------------------|
|  | : Test point              |
|  | : Only test point display |

##### (6) Connecting method

- |  |                         |
|--|-------------------------|
|  | : Connector             |
|  | : Wrapping or soldering |
|  | : Receptacle            |

##### (7) Ground symbol

- |  |                                 |
|--|---------------------------------|
|  | : LIVE side ground              |
|  | : ISOLATED(NEUTRAL) side ground |
|  | : EARTH ground                  |
|  | : DIGITAL ground                |

## 5. NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( $\perp$ ) side GND and the ISOLATED(NEUTRAL) : ( $\nearrow$ ) side GND. Therefore, care must be taken for the following points.

- (1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2) Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus ( oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

# CONTENTS

**BLOCK DIAGRAM** .....2-3

**WIRING ARRIGNMENT** .....2-5

**CIRCUIT DIAGRAMS**

**MAIN PWB CIRCUIT DIAGRAM** .....2-7

**VIDEO PROCESSOR PWB CIRCUIT DIAGRAM** .....2-9

**CRT SOCKET PWB CIRCUIT DIAGRAM** ..... 2-17

**KEY VR PWB CIRCUIT DIAGRAM** ..... 2-19

**INTERFACE PWB CIRCUIT DIAGRAM** ..... 2-21

**PATTERN DIAGRAMS**

**INTERFACE PWB PATTERN** ..... 2-23

**MAIN PWB PATTERN** ..... 2-25

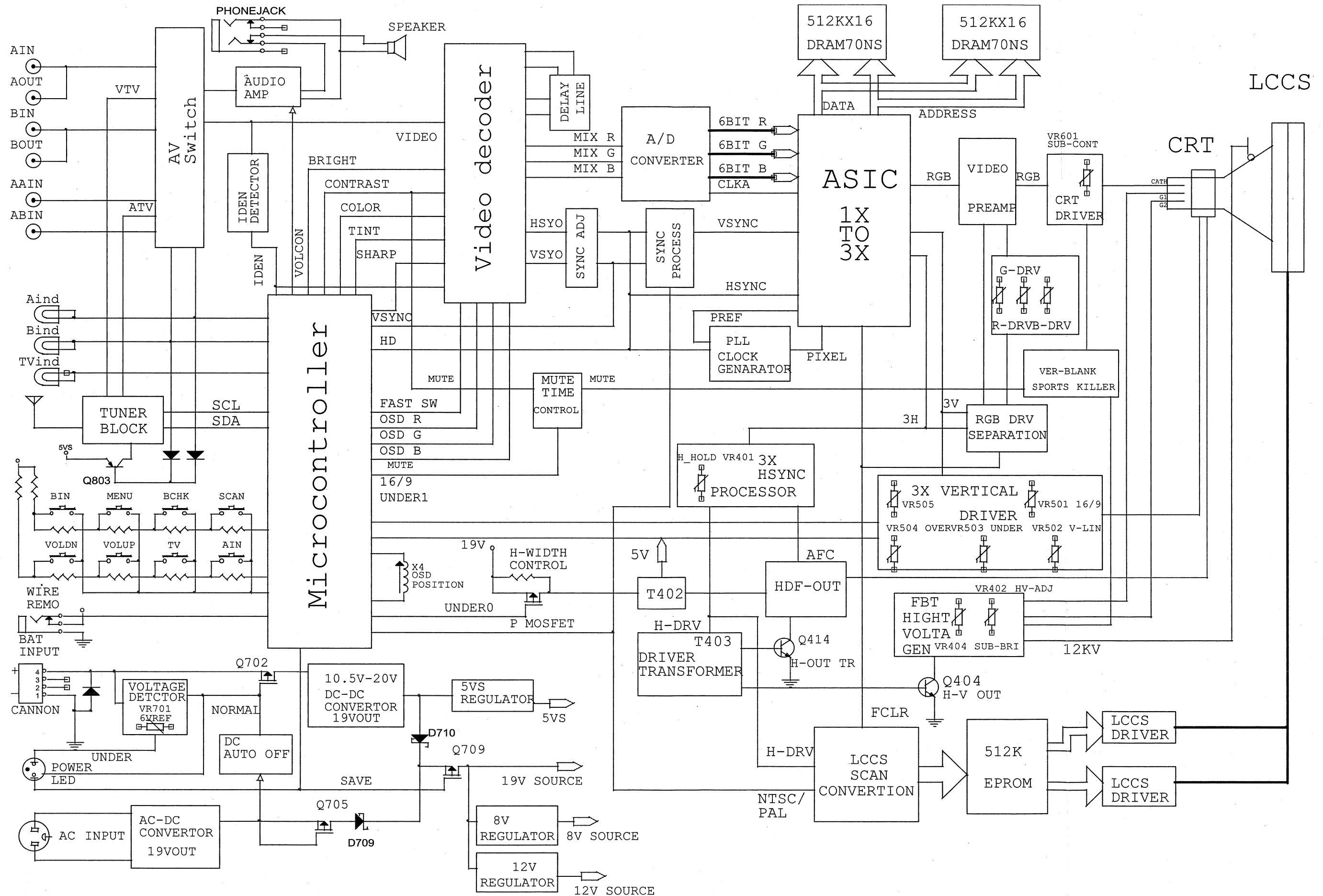
**VIDEO PROCESSOR PWB PATTERN** ..... 2-27

**KEY VR PWB PATTERN** ..... 2-29

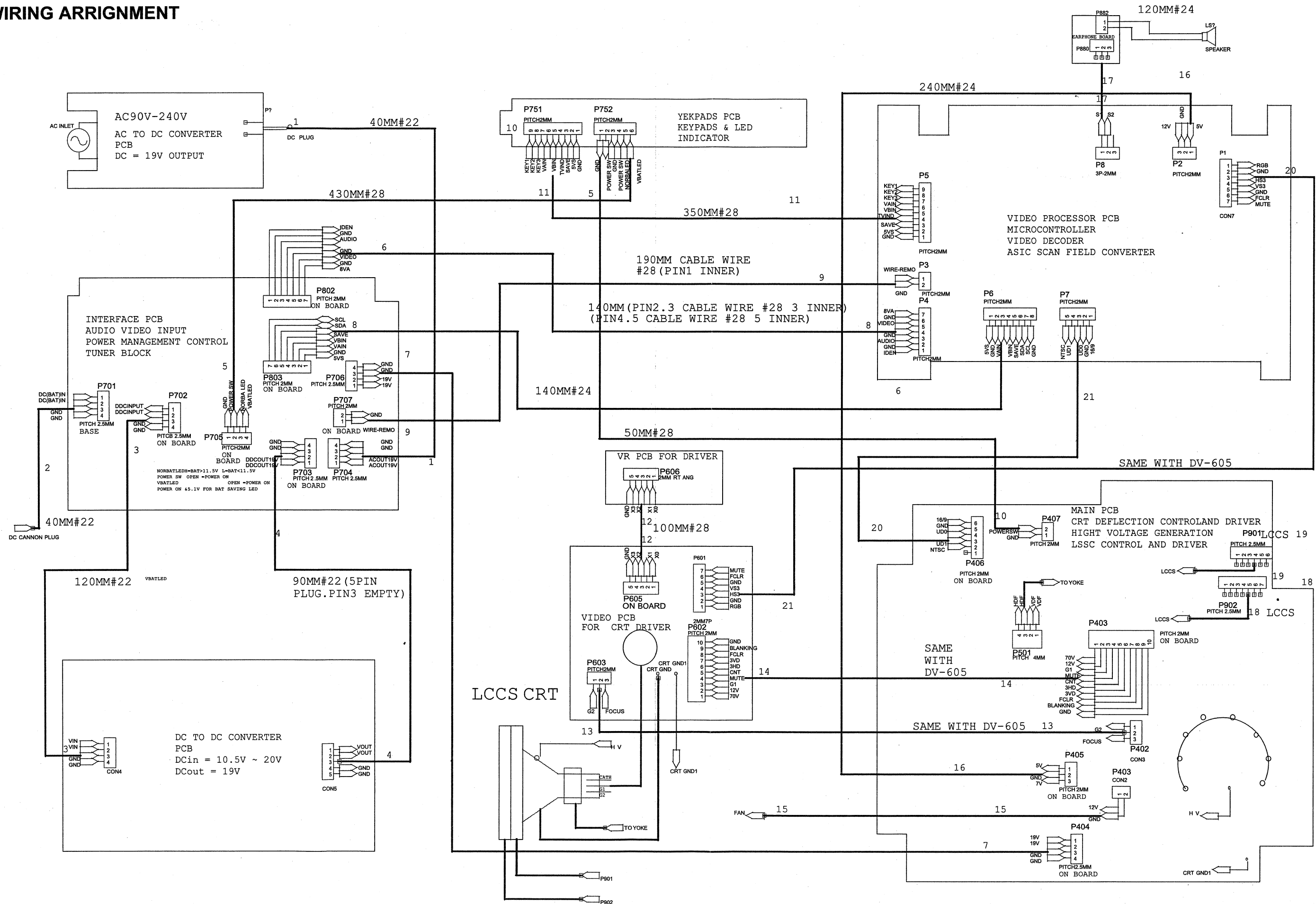
**CRT SOCKET PWB PATTERN** ..... 2-31



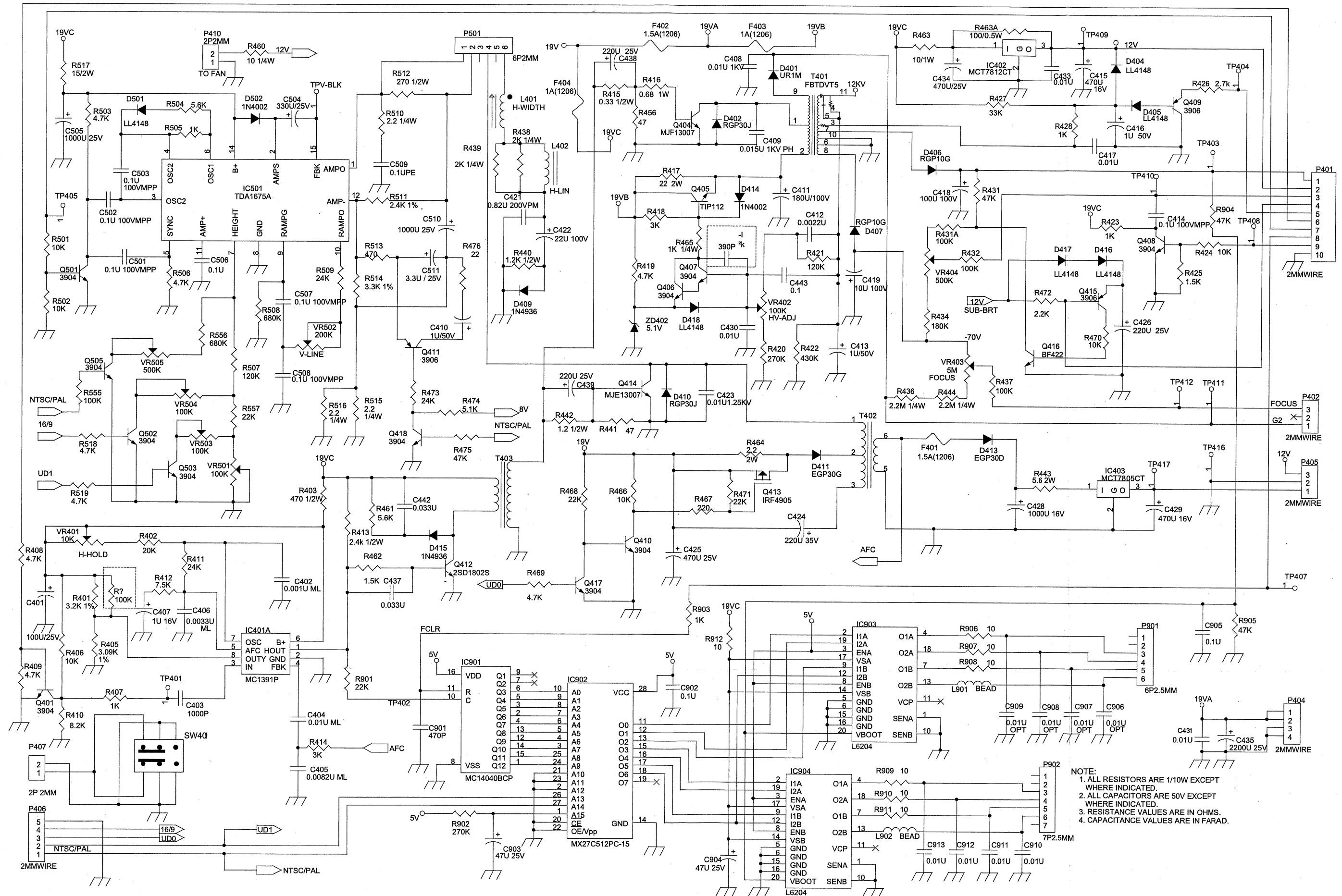
## BLOCK DIAGRAM



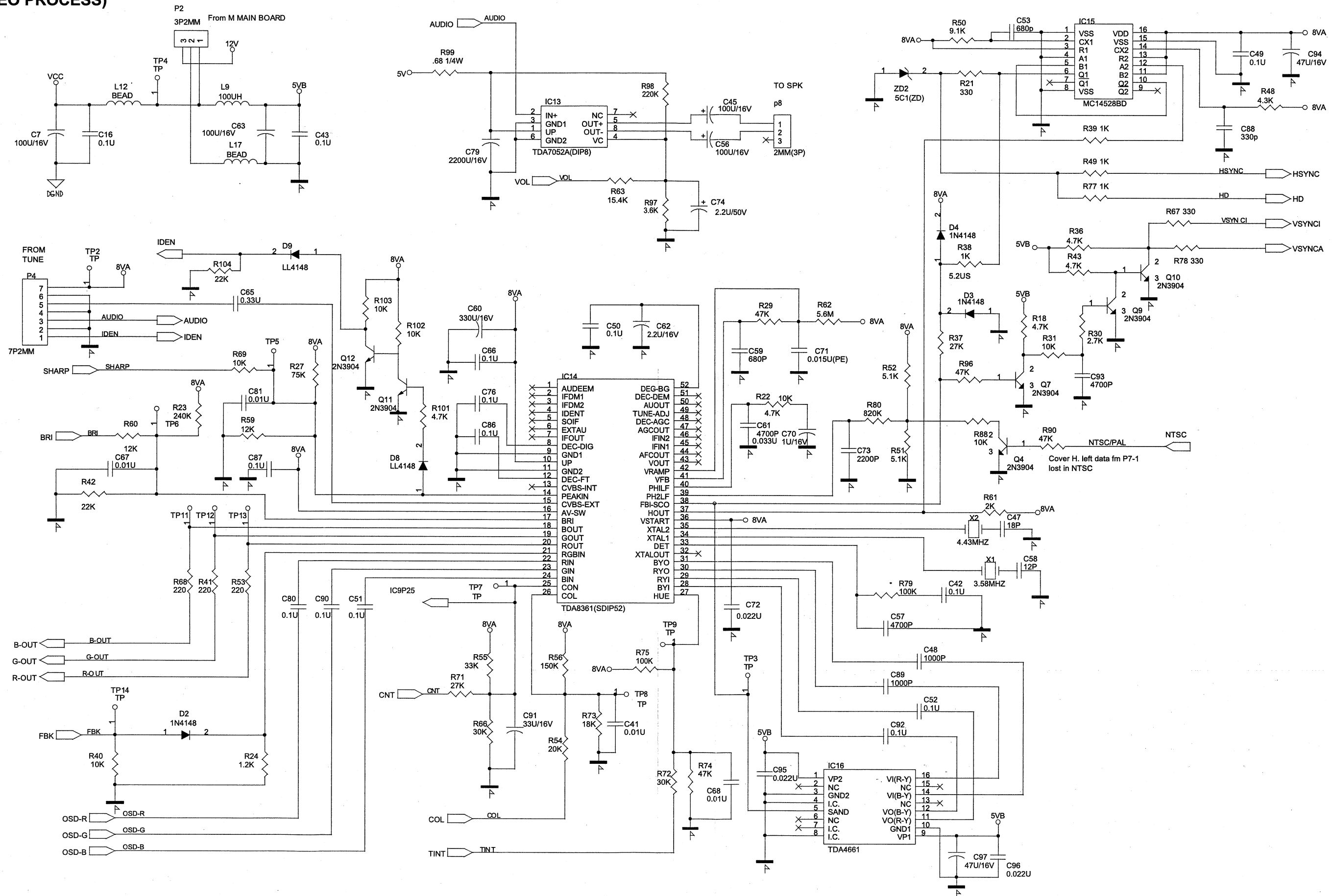
## WIRING ARRANGMENT



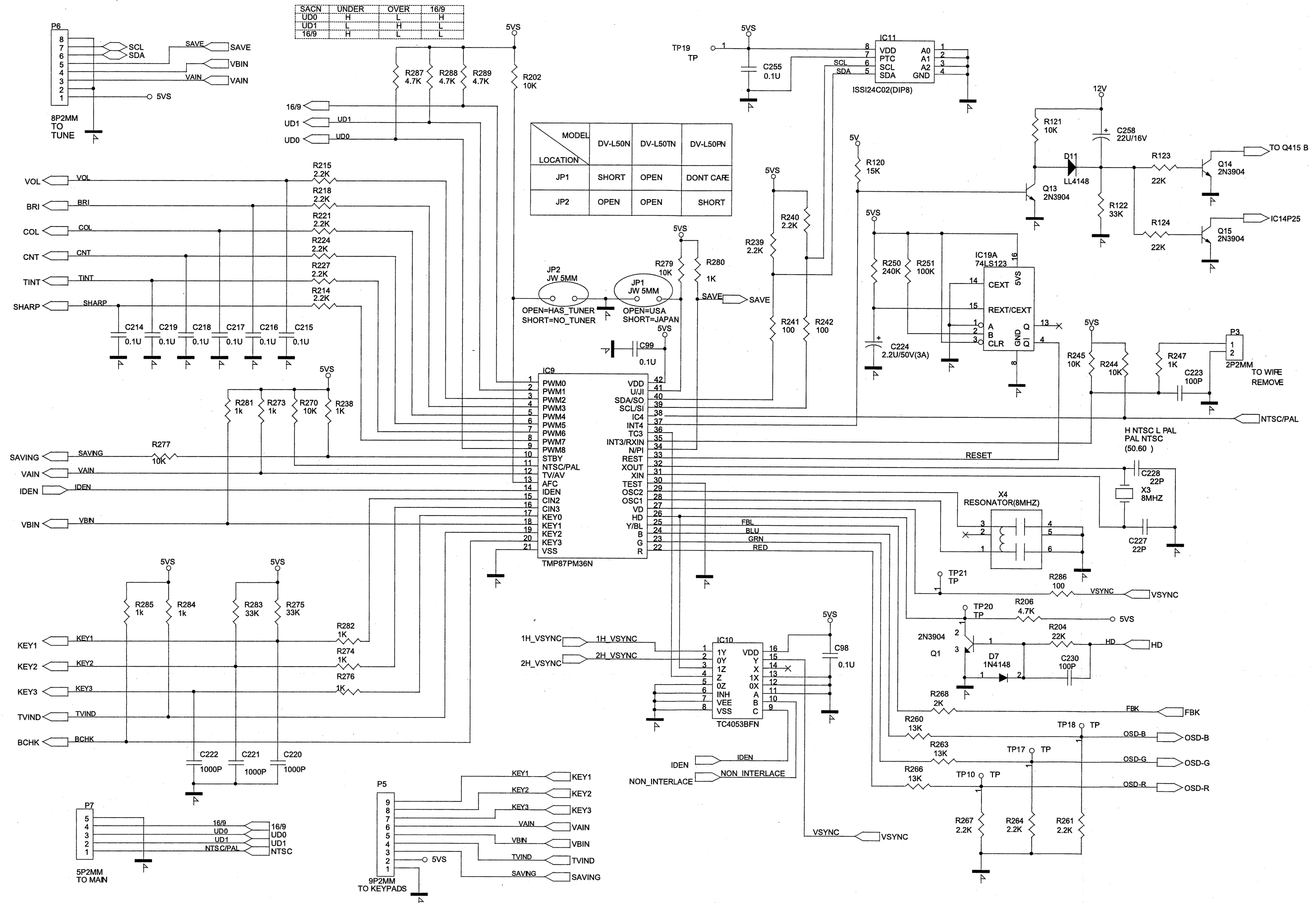
## 【 MAIN PWB CIRCUIT DIAGRAM 】



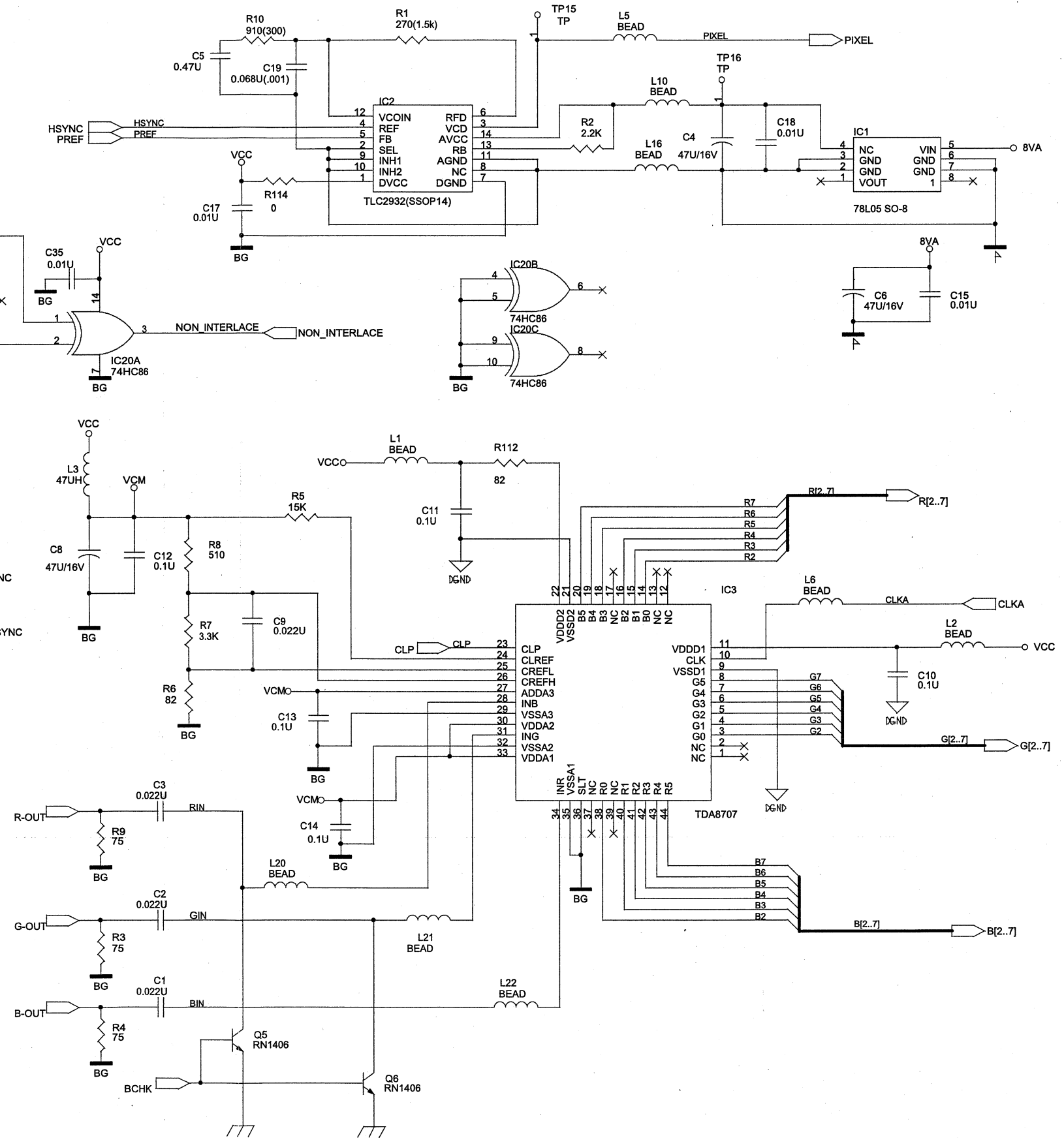
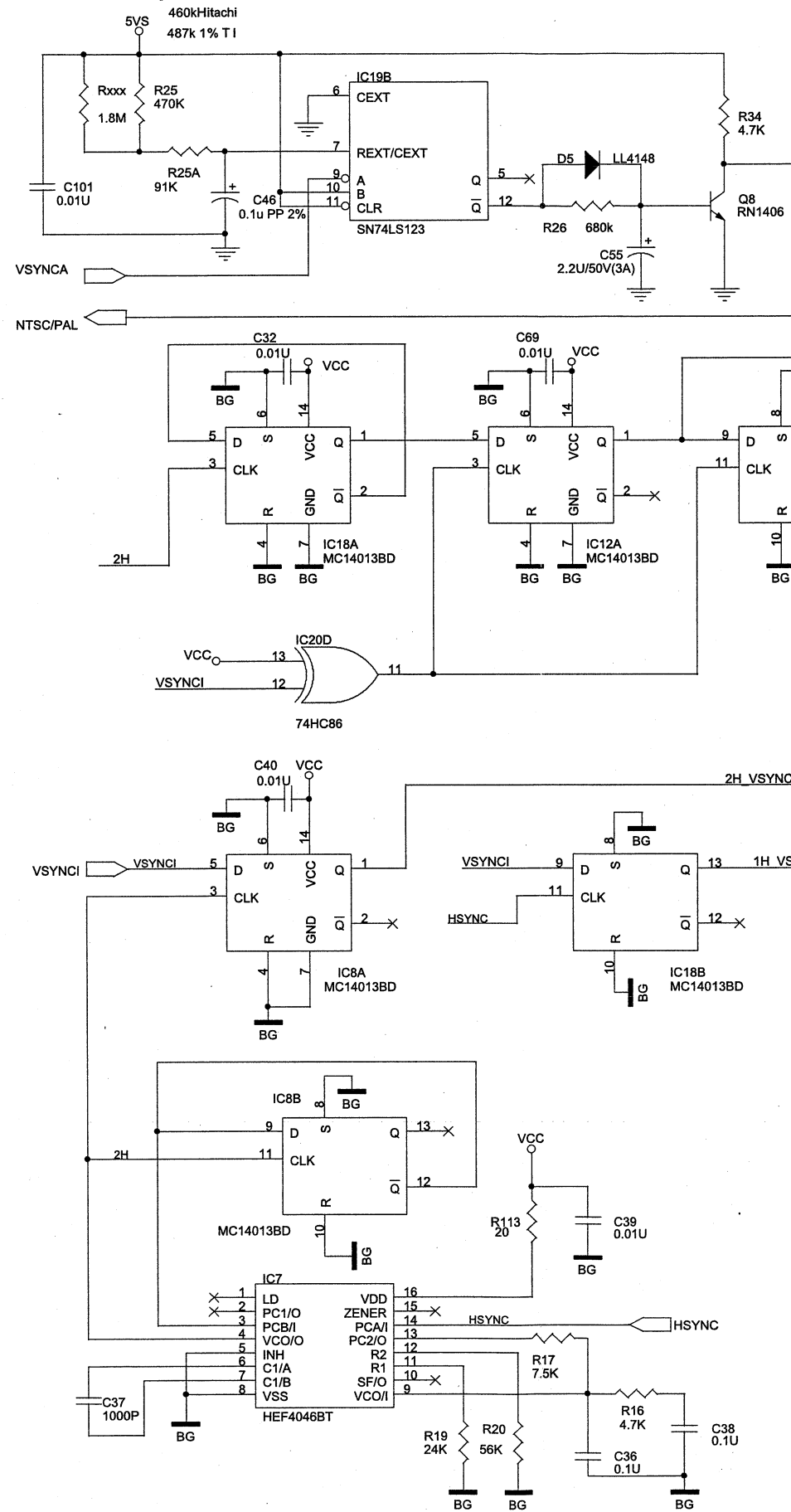
# **[ VIDEO PROCESSOR PWB CIRCUIT DIAGRAM ]** **(VIDEO PROCESS)**



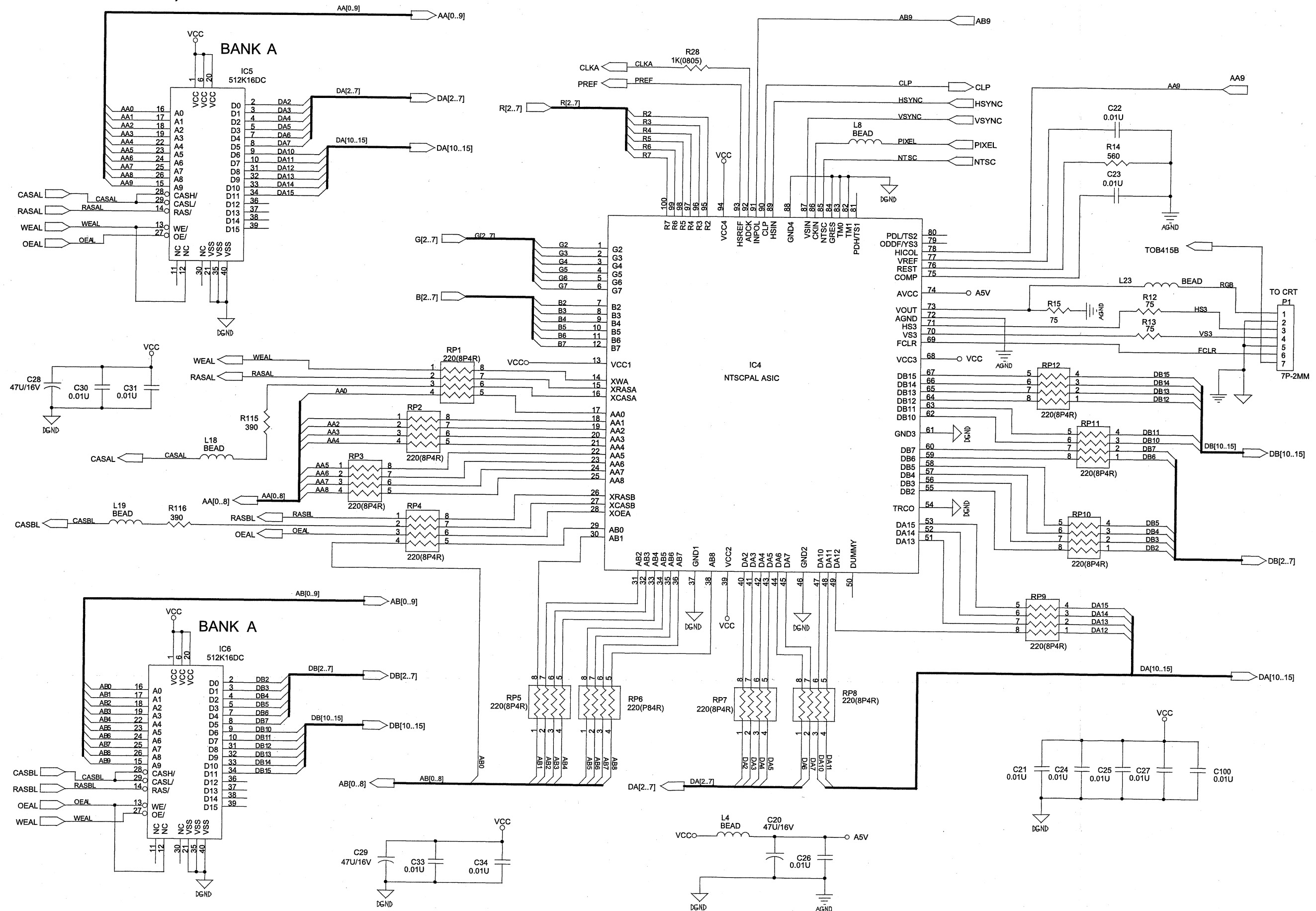
# 【 VIDEO PROCESSOR PWB CIRCUIT DIAGRAM 】 (MICRO COMPUTER)



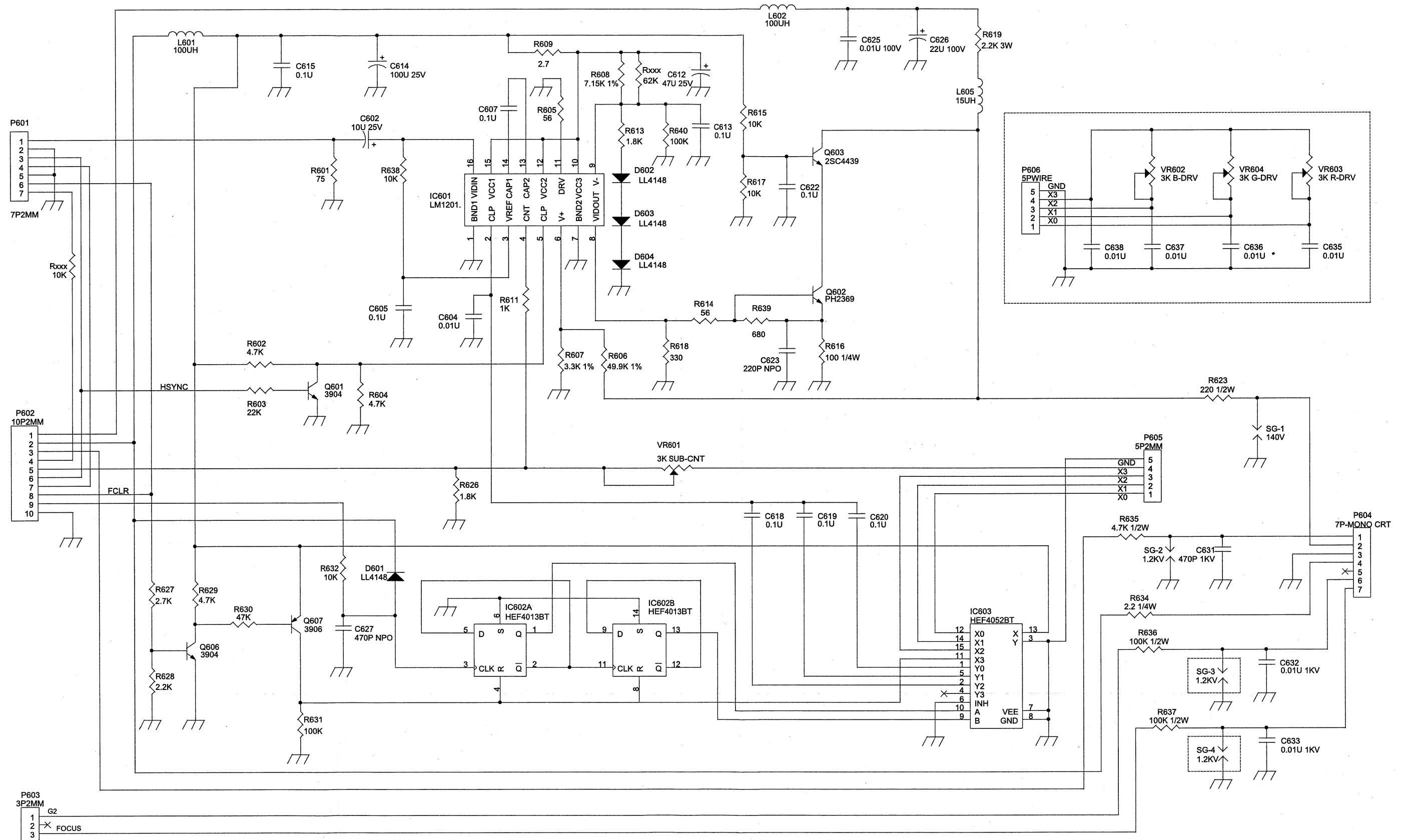
### 【 VIDEO PROCESSOR PWB CIRCUIT DIAGRAM 】 (AD CONVERTER)



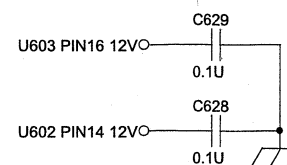
**【 VIDEO PROCESSOR PWB CIRCUIT DIAGRAM 】**  
**(DIGITAL SIGNAL PROCESS)**



## 【 CRT SOCKET PWB CIRCUIT DIAGRAM 】



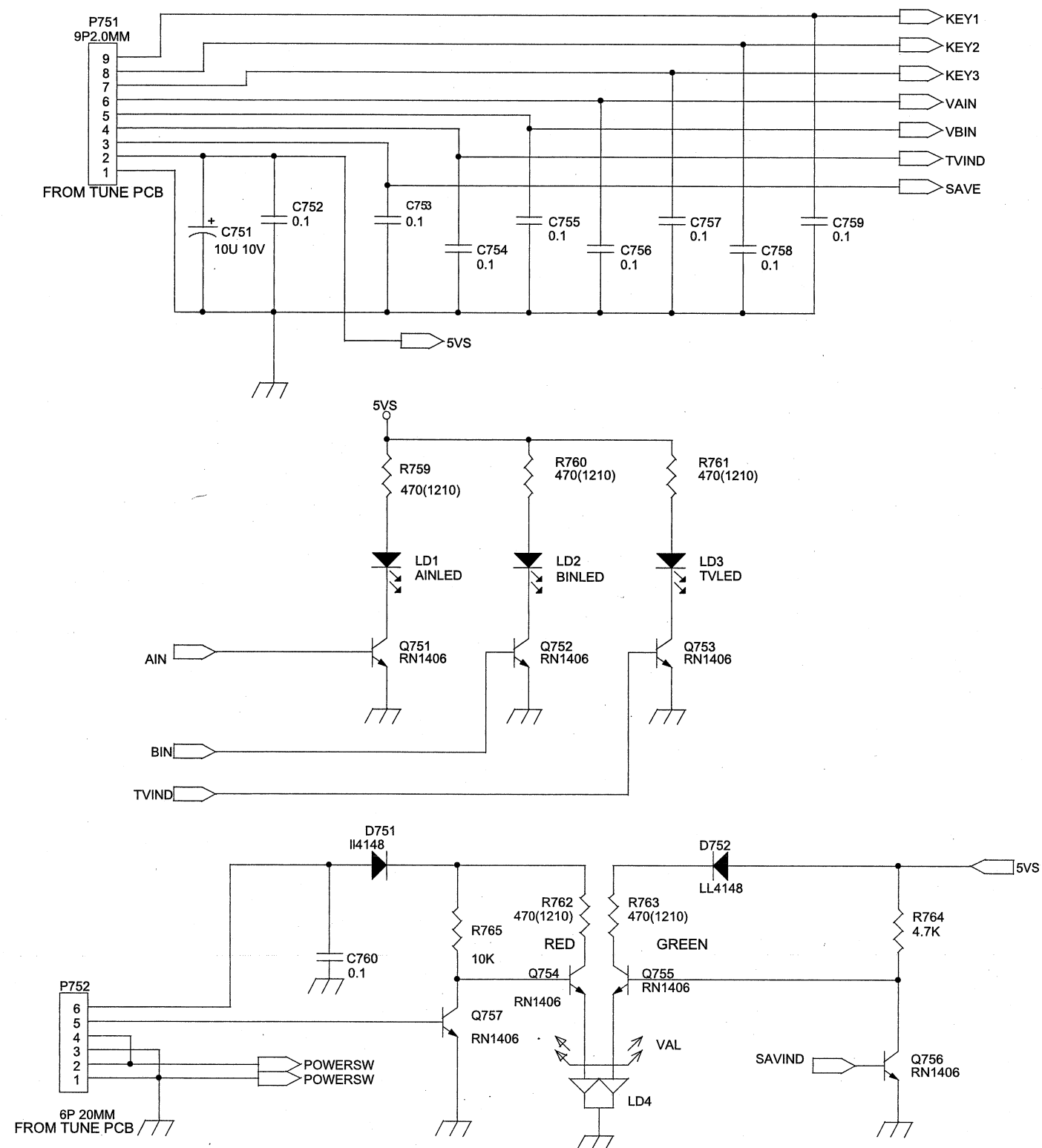
NOTE:  
 1. ALL RESISTORS ARE 1/8W EXCEPT WHERE INDICATED.  
 2. ALL CAPACITORS ARE 50V EXCEPT WHERE INDICATED.  
 3. RESISTANCE VALUES ARE IN OHMS.  
 4. CAPACITANCE VALUES ARE IN FARAD.



1. U603 PIN16=12V PIN 8=GND  
 2. U602 PIN14=12V PIN 7=GND

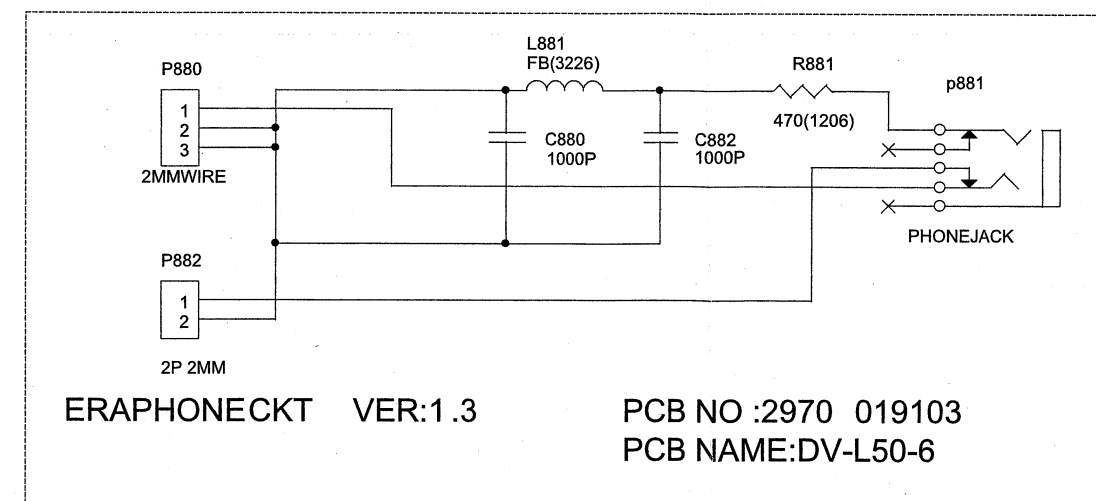
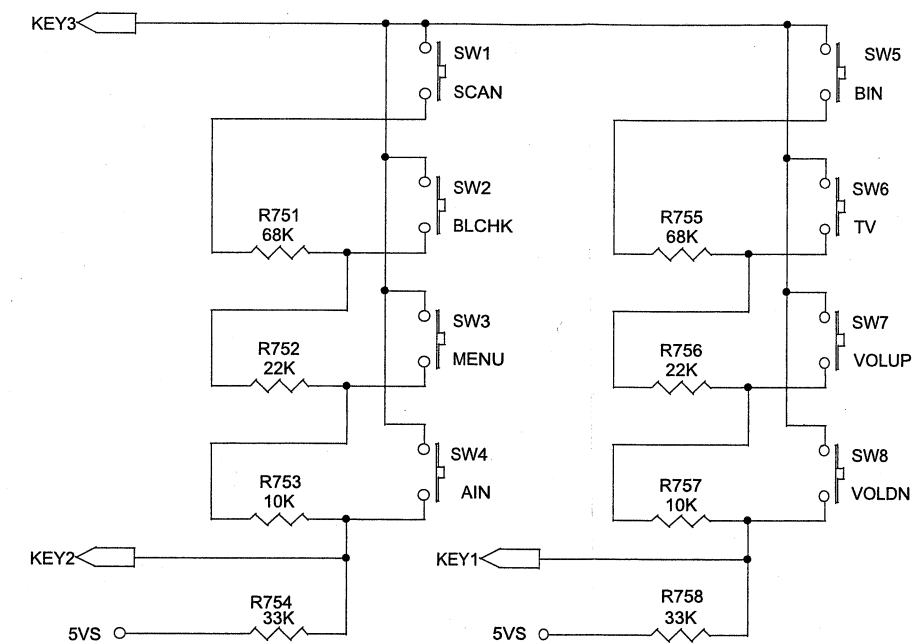


## 【 KEY-VR PWB CIRCUIT DIAGRAM 】



## NOTE:

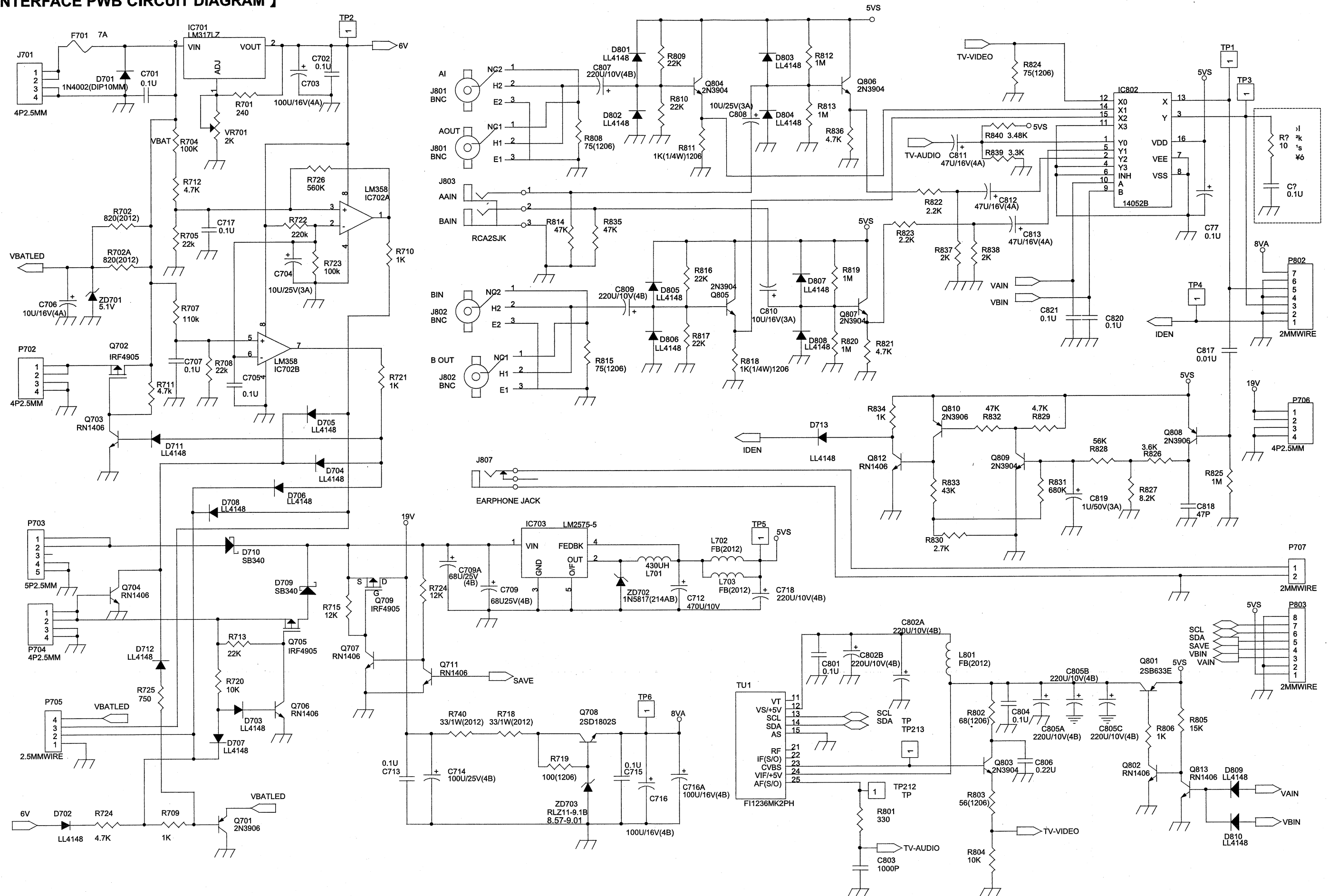
1. ALL RESISTORS ARE 1/8W EXCEPT WHERE INDICATED.
2. ALL CAPACITORS ARE 50V EXCEPT WHERE INDICATED.
3. RESISTANCE VALUES ARE IN OHMS.
4. CAPACITANCE VALUES ARE IN FARAD.



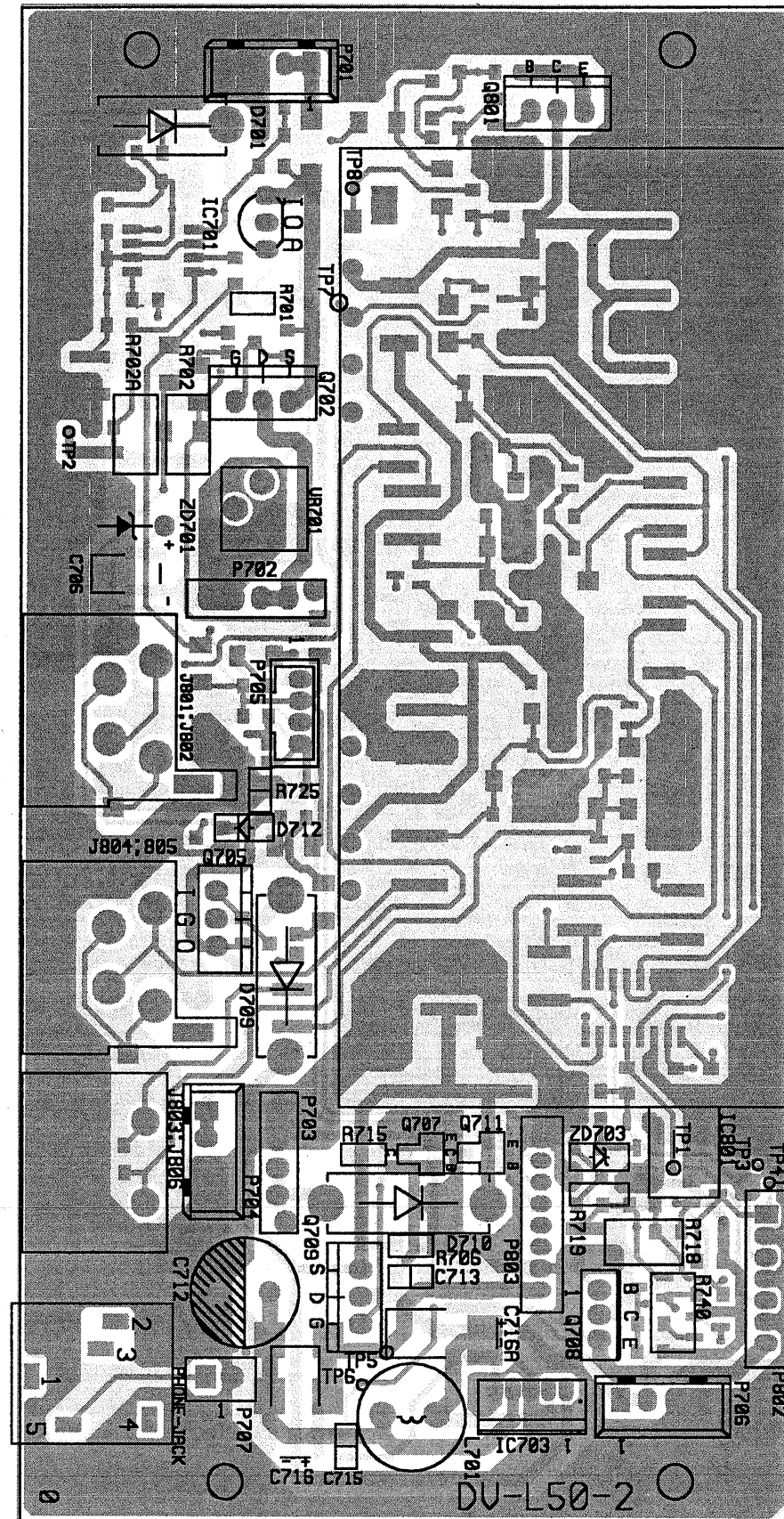
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PCB NO :2970 019103  
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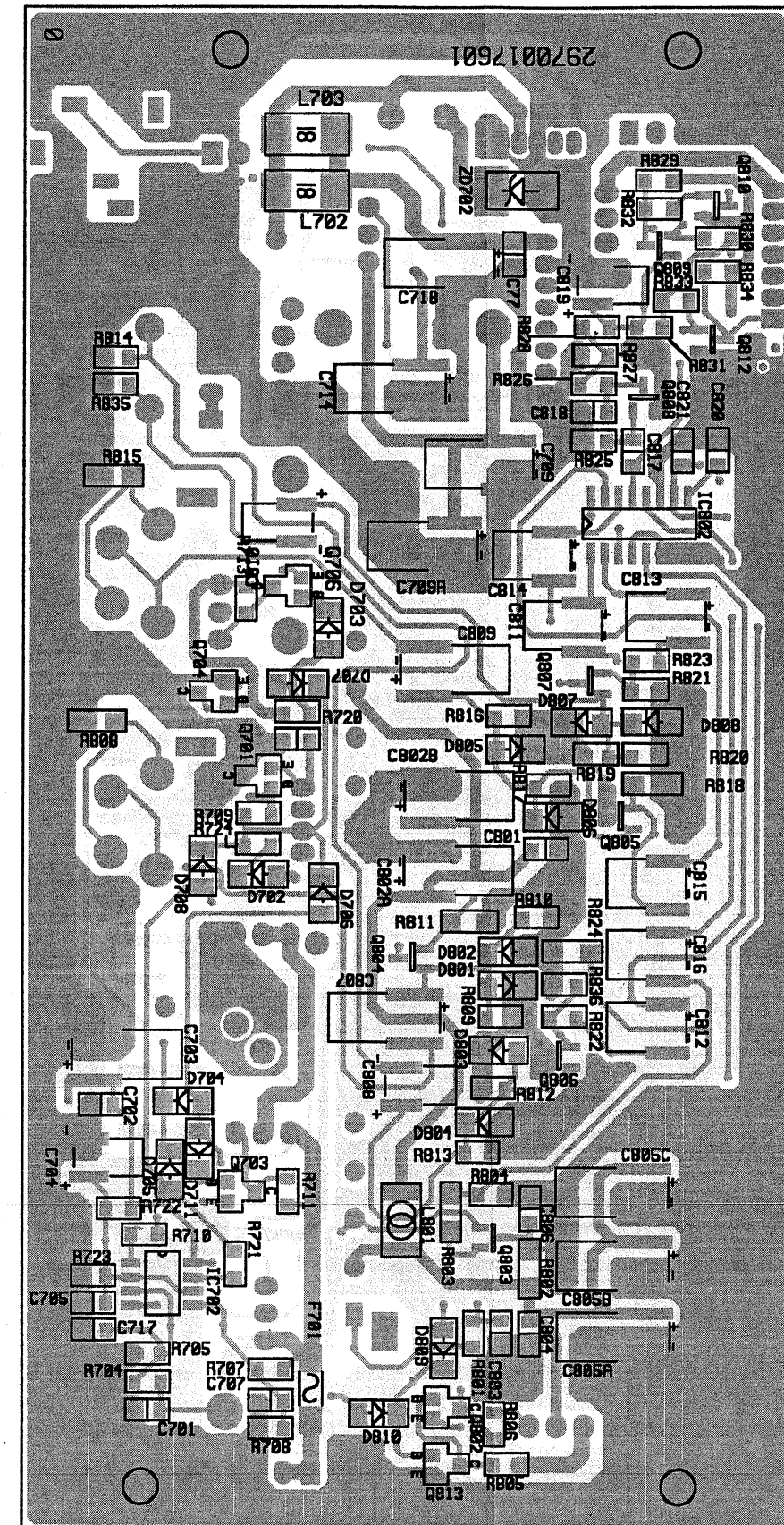
# [ INTERFACE PWB CIRCUIT DIAGRAM ]



**【 INTERFACE PWB PATTERN PARTS SIDE 】**

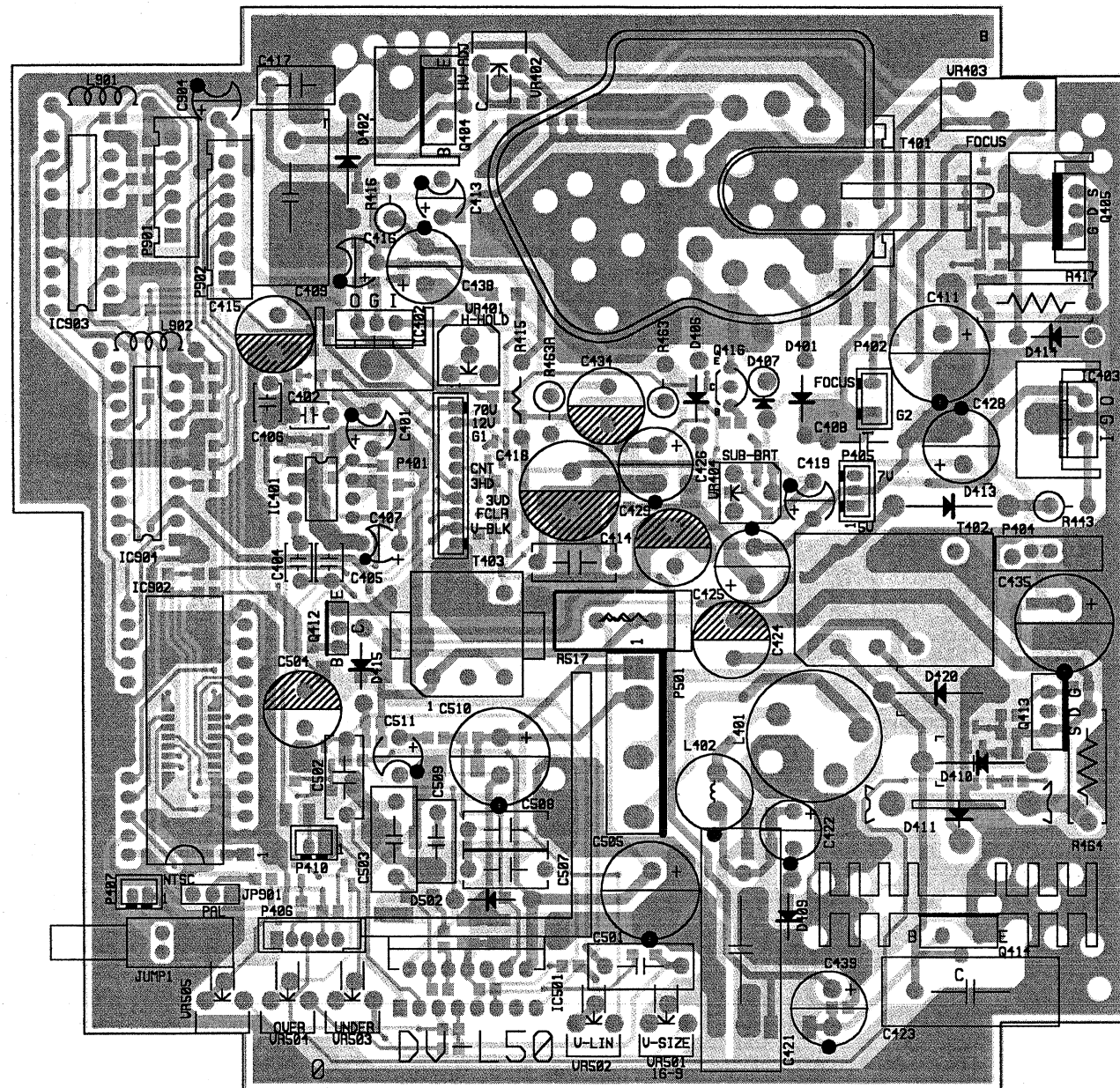


**【 INTERFACE PWB PATTERN SOLDER SIDE 】**

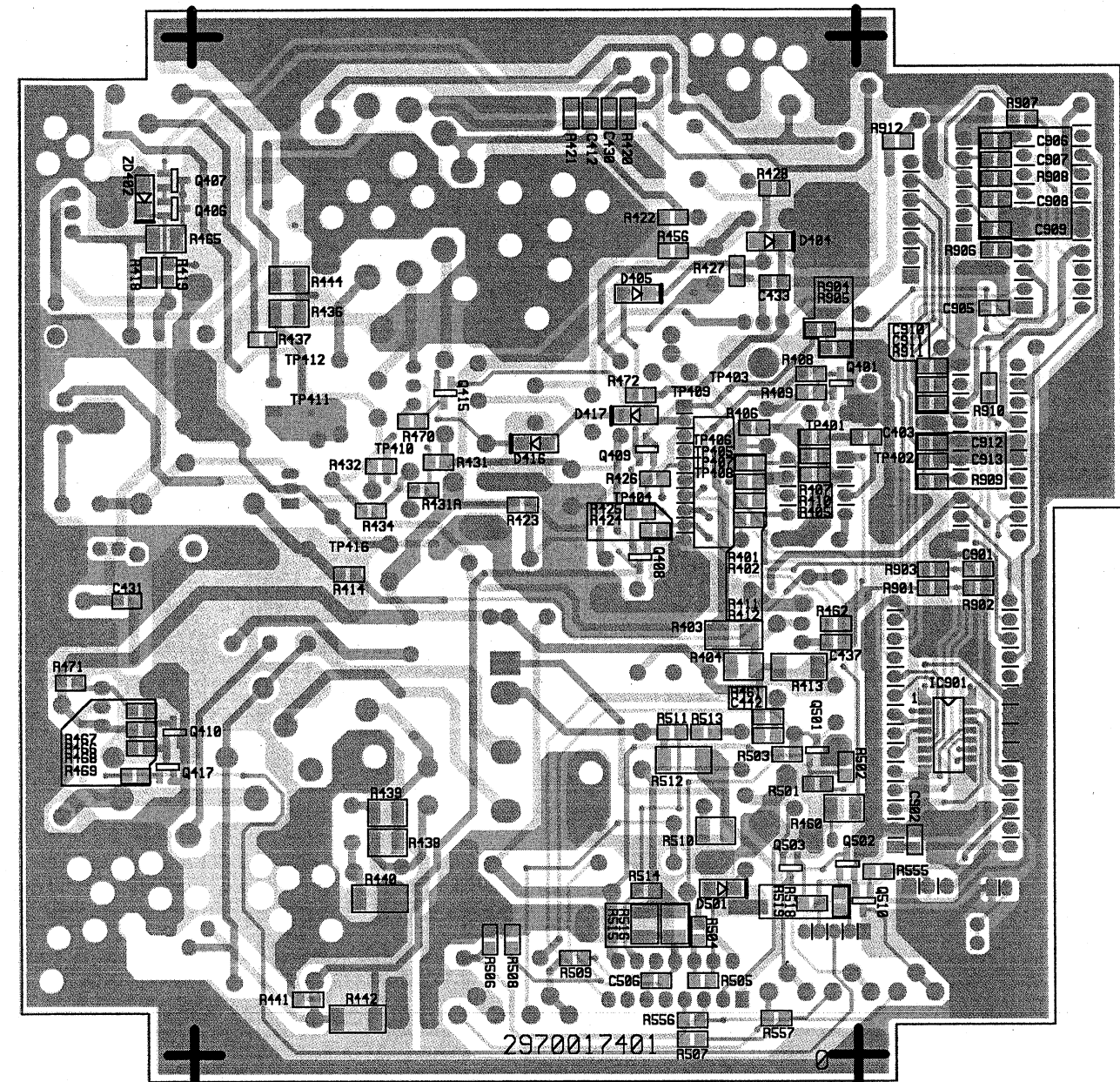




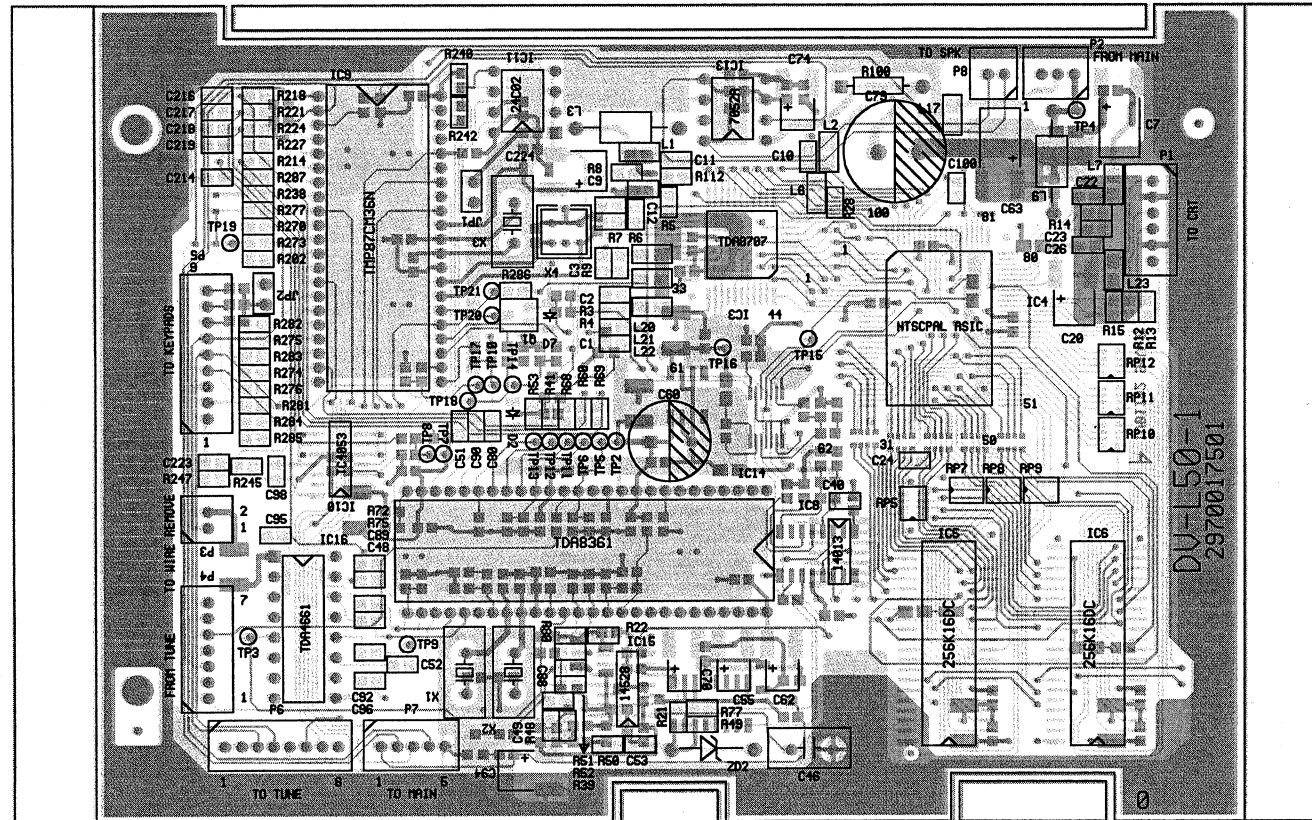
【 MAIN PWB PATTERN PARTS SIDE 】



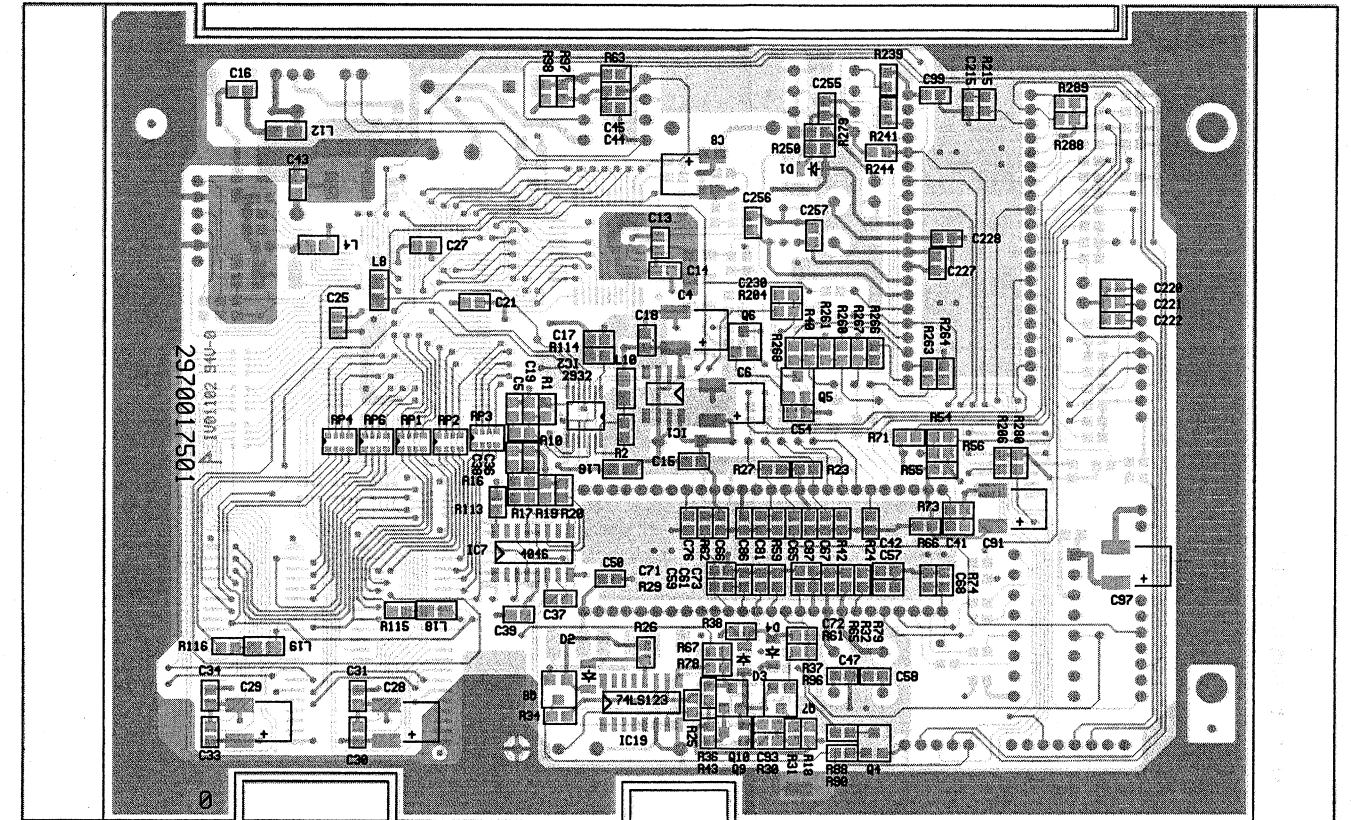
【 MAIN PWB PATTERN SOLDER SIDE 】



## 【 VIDEO PROCESSOR PWB PATTERN PARTS SIDE 】



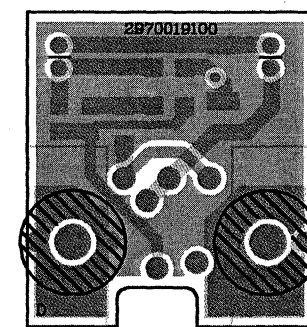
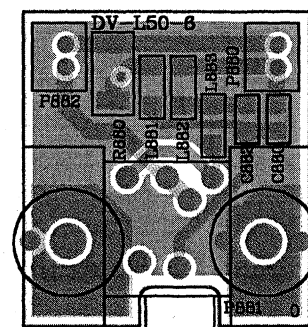
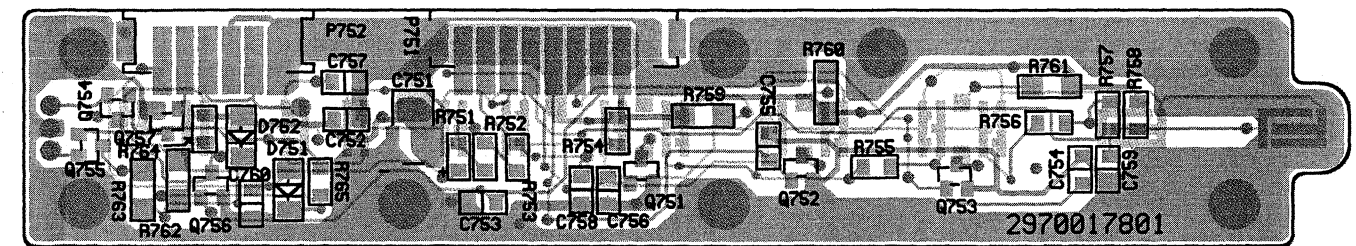
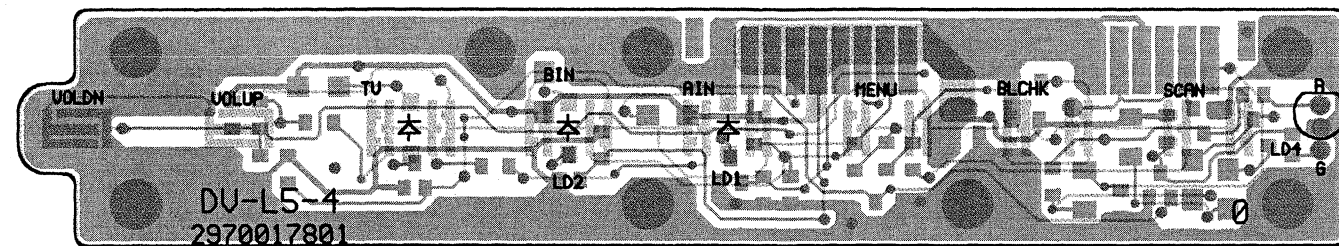
## 【 VIDEO PROCESSOR PWB PATTERN SOLDER SIDE 】





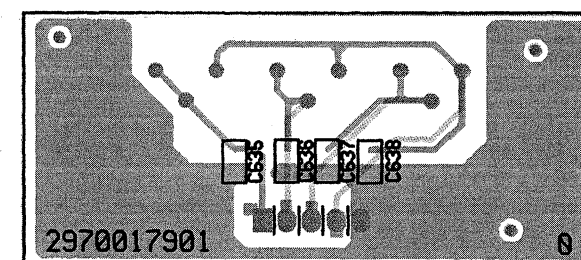
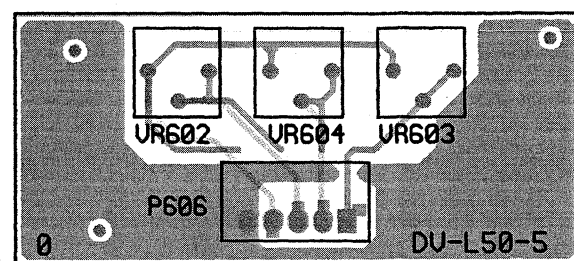
【 KEY VR PWB PATTERN PARTS SIDE 】

【 KEY VR PWB PATTERN SOLDER SIDE 】

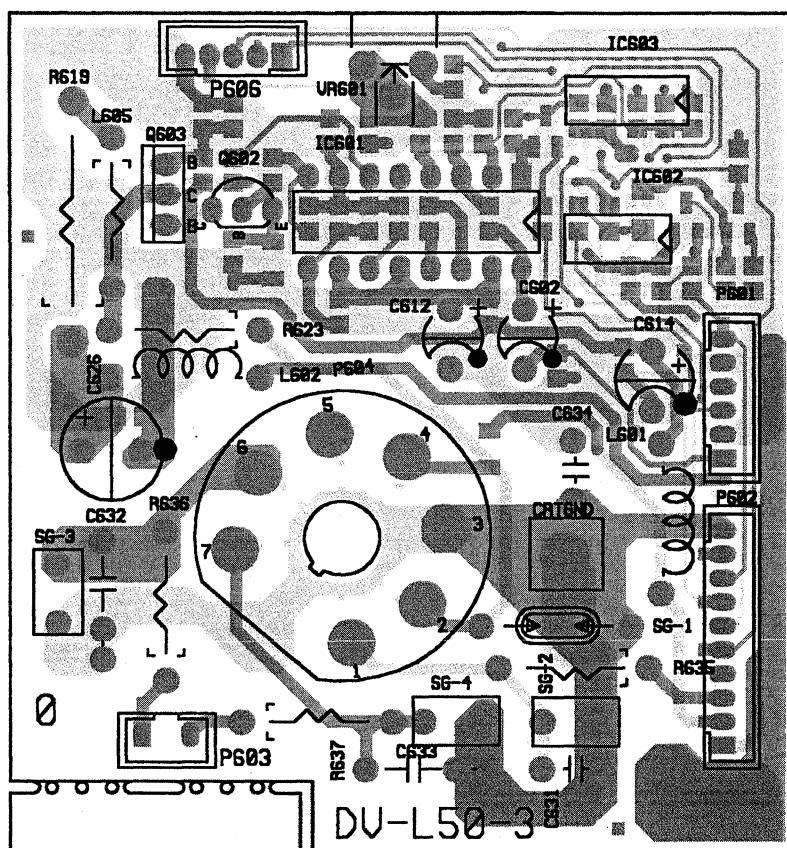


( RGB VR PARTS SIDE )

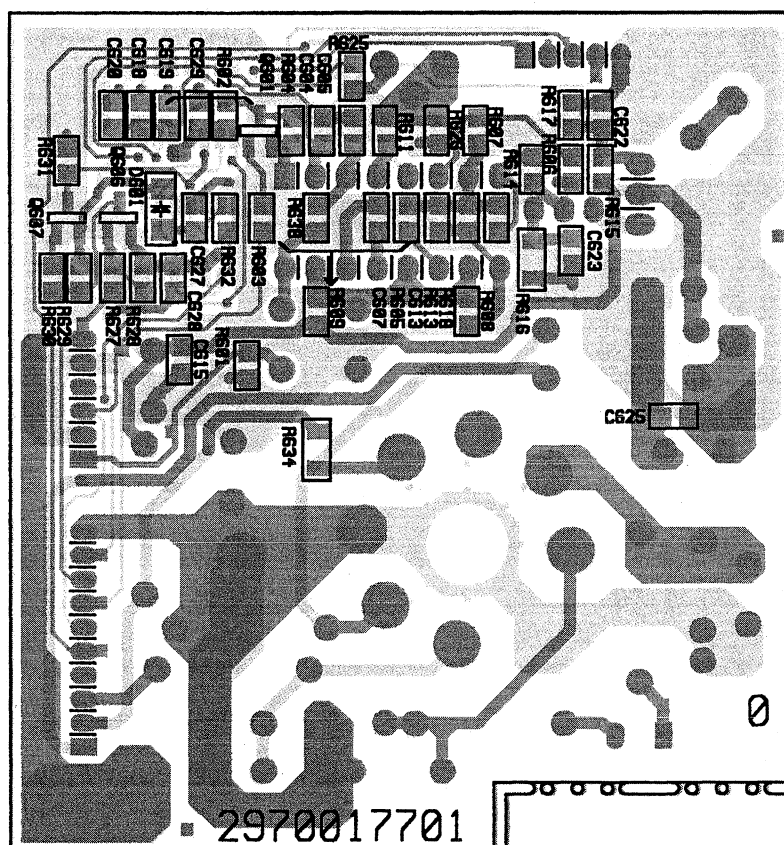
( RGB VR SOLDER SIDE )



【 CRT SOCKET PWB PATTERN PARTS SIDE 】



【 CRT SOCKET PWB PATTERN SOLDER SIDE 】







# JVC

## SERVICE MANUAL

### LCCS VIDEO MONITOR

BASIC CHASSIS

Q1B1

# TM-L500PN

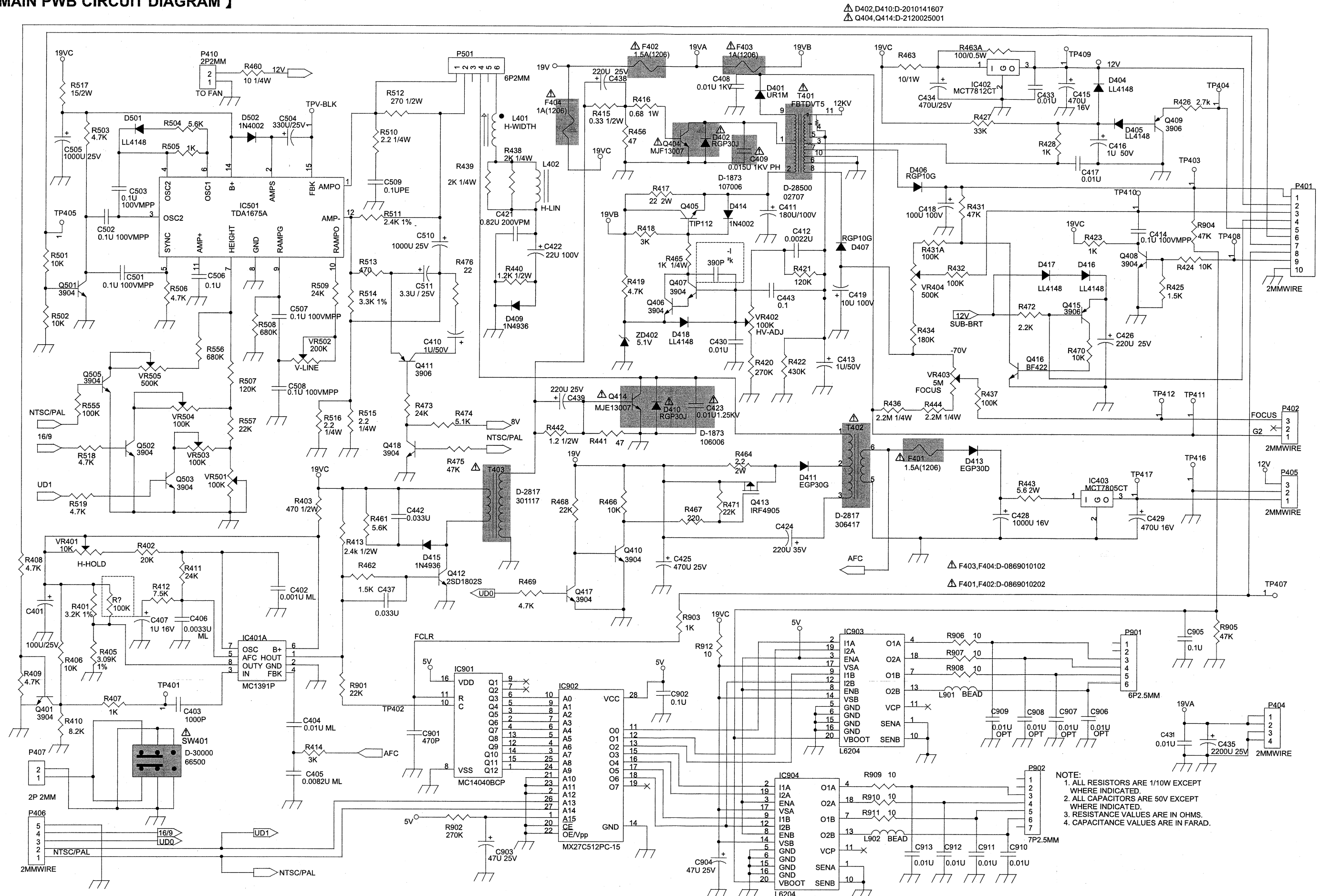
Supplementary

In the circuit diagram of TM-L500PN service manual(No.51584 Dec.1999), the mark of safety critical components are forgot to write.

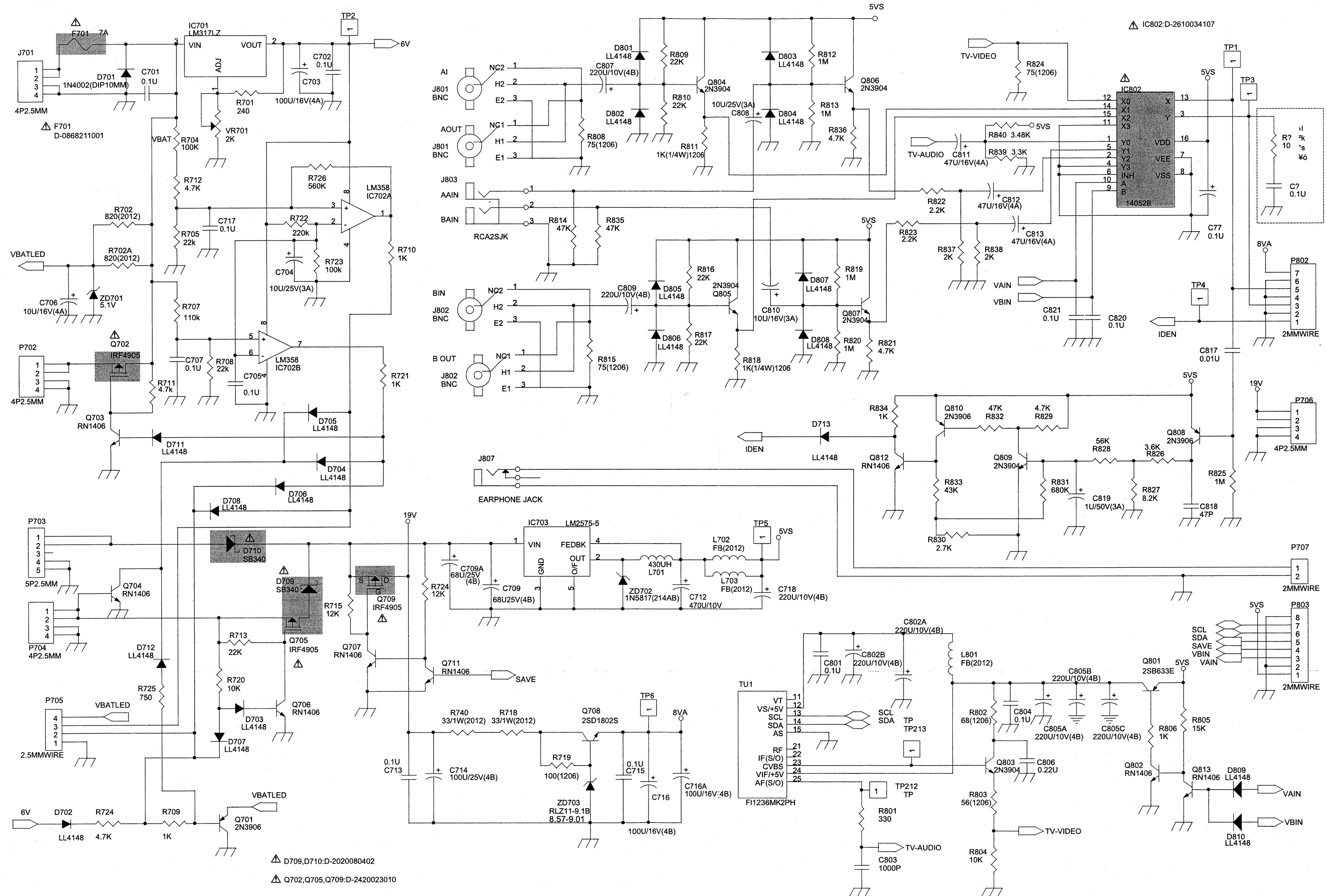
So we are informing you of these errors and of the safety critical components on the circuit diagram.



## 【 MAIN PWB CIRCUIT DIAGRAM 】



## 【 INTERFACE PWB CIRCUIT DIAGRAM 】







# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

TM-L500PN



Printed in Japan  
VP 0102  
HK

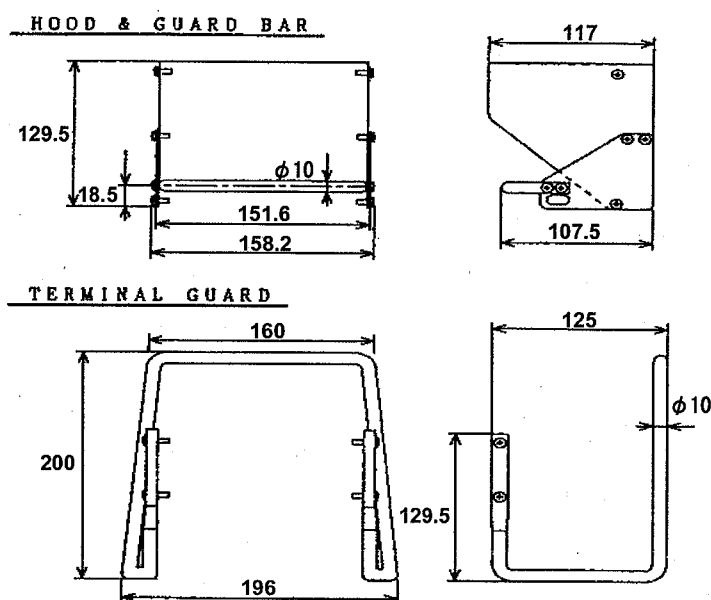
# JVC

## SERVICE MANUAL

### FIELD KIT

## TS-C500FKE

(TM-L500PN)



■ MASS : 1.2 kg

UNIT : mm

△	Parts No.	Parts Name	Description
	CM44287-00C	SCREW	x12
	QYSDST4016N	SCREW	x4
	JVC6-PD10-00	PACKING CASE	
	LC20636-001B	INST SHEET	
	CP31004-016	CARTON LABEL	

# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

TS-C500FKE



Printed in Japan  
VP 0003  
M.H.

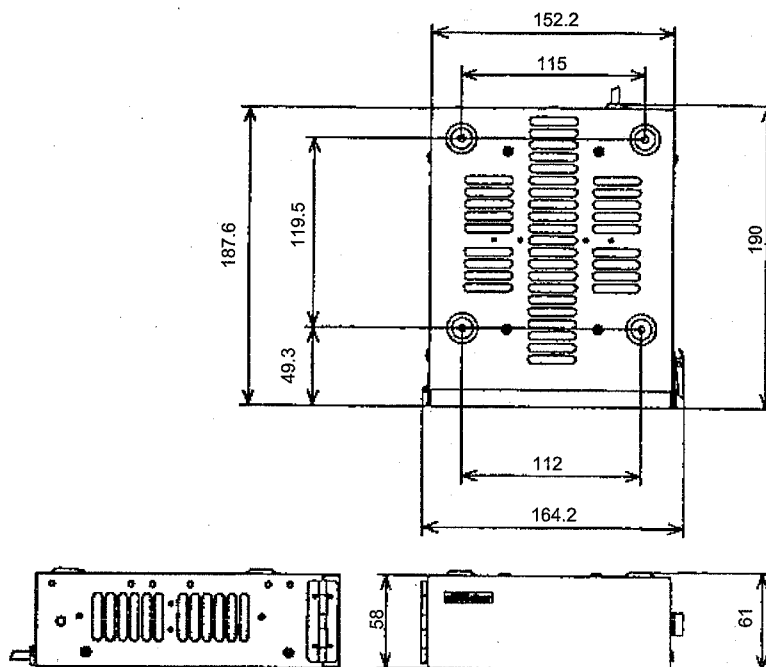
# JVC

## SERVICE MANUAL

### BATTERY ADAPTOR

## BH-C901E

(TM-1010PN/TM-L500PN)



■MASS : 1.2 k g

UNIT : mm

△	Parts No.	Parts Name	Description
	QYSDST4006M	SCREW(BACK)	x 8
	QYSPST4008Z	SCREW(GOLD)	x 8
	JVC3-PD10-00	PACKING CASE	
	LC20617-001A	INST SHEET	
	LC31090-003A	CARTON LABEL	

# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

BH-C901E



Printed in Japan  
VP 0002  
NN



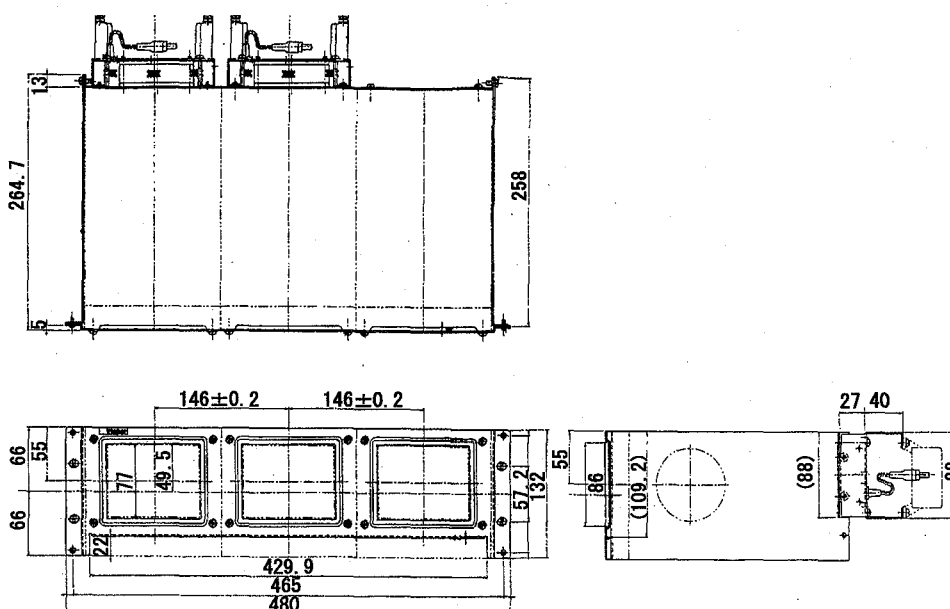
# JVC

## SERVICE MANUAL

### RACK MOUNT ADAPTOR

## RK-C503E

(TM-L500PN)



■MASS : 2.4 kg

UNIT : mm

△	Parts No.	Parts Name	Description
	QYSDSP3012M	SCREW	x 12
	QYSDST3006M	SCREW	x 4
	QYSPST4010M	SCREW	x 8
	JVC2-P500-02	SCREW	x 8
	QPA00500805	POLY BAG	
	JVC2-PD10-00	PACKING CASE	
	LC20618-001A	INST SHEET	
	LC31090-004A	CARTON LABEL	

# JVC

VICTOR COMPANY OF JAPAN, LIMITED  
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

RK-C503E



Printed in Japan  
VP 0002  
NN

# OPERATING INSTRUCTIONS

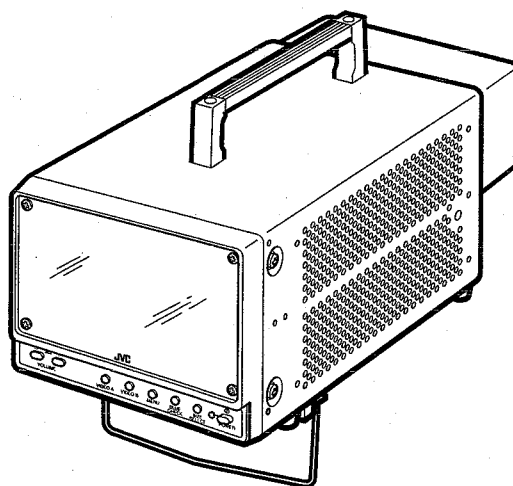
# JVC

## LCCS VIDEO MONITOR

BEDIENUNGSANLEITUNG : LCCS-VIDEO-MONITOR  
MANUEL D'INSTRUCTIONS : MONITEUR VIDÉO LCCS  
MANUALE DI ISTRUZIONI : MONITOR VIDEO LCCS  
INSTRUCCIONES : MONITOR DE VIDEO LCCS

## TM-L500PN

## INSTRUCTIONS



ENGLISH

DEUTSCH

FRANÇAIS

ITALIANO

ESPAÑOL

**INSTRUCTIONS**

**LCCS VIDEO MONITOR**

**TM-L500PN**

Contents	Page
<b>SAFETY PRECAUTIONS</b>	<b>2</b>
<b>CONTROLS AND FEATURES</b>	<b>4</b>
FRONT & RIGHT VIEW	4
REAR VIEW	6
<b>BASIC CONNECTION EXAMPLES</b>	<b>7</b>
<b>PREPARING POWER SUPPLY</b>	<b>8</b>
INDOOR USAGE (AC Power Supply)	8
OUTDOOR USAGE (DC Power Supply)	9
<b>BASIC OPERATIONS</b>	<b>10</b>
MONITORING THE PICTURE	10
<b>SETTINGS AND ADJUSTMENTS</b>	<b>11</b>
BASIC MENU OPERATION	11
MENU CONTENTS	12
SCREEN SIZE ADJUSTMENTS	13
BLUE CHECK FUNCTION	14
<b>TROUBLESHOOTING</b>	<b>15</b>
<b>CHARACTERISTICS OF LCCS VIDEO MONITOR SYSTEM</b>	<b>17</b>
<b>SPECIFICATIONS</b>	<b>18</b>

**ENGLISH**

Thank you for purchasing this JVC LCCS video monitor.

Before using, read and follow all instructions carefully to take full advantage of the monitor's capabilities. Retain these instructions for future reference.

\* LCCS = Liquid Crystal Colour Shutter

## SAFETY PRECAUTIONS

### WARNING :

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

### WARNING :

THIS APPARATUS MUST BE EARTHED.

### CAUTION :

To reduce the risk of electric shock, do not remove cover. Refer servicing to qualified service personnel.

### CAUTION :

This equipment has not means of disconnection from mains, therefore please be considered following condition.

- for PERMANENTLY CONNECTED EQUIPMENT, that a readily accessible disconnect device shall be incorporated in the fixed wiring;
- for PLUGGABLE EQUIPMENT, that the socket-outlet shall be installed near the equipment and shall be easily accessible.

Improper operations, in particular alteration of high voltage or changing the type of tube may result in x-ray emission of considerable dose. A unit altered in such a way no longer meets the standards of certification, and must therefore no longer be operated.

### PRECAUTIONS

- Use only the power source specified on the unit. (100 V AC - 240 V AC, 50 Hz/60 Hz or 12 V DC)
- Keep flammable material, water, and metal objects away from the unit - especially the interior of the unit.
- This unit incorporates high voltage circuitry. For your own safety and that of your equipment, do not attempt to modify or disassemble this monitor. There are no user-serviceable parts inside.
- Unplug the monitor when you're not going to be using it for a long period.

### HANDLING

- Avoid shocks or vibrations. These may damage the unit and cause it to malfunction.
- DO NOT block the ventilation slots.
- DO NOT expose this unit to high temperatures. Extended exposure to direct sunlight or a heater could deform the cabinet or cause the performance of internal components to deteriorate.

- DO NOT place the unit near appliances generating strong electric or magnetic fields. There can generate picture noise and instability.
- DO NOT do any of the following; it may damage the cabinet or cause the paint to peel off:
  - Wipe the monitor with an abrasive cloth,
  - Wipe the monitor with too much pressure,
  - Wipe the monitor with thinner or benzene,
  - Place rubber or vinyl products on the monitor for long periods of time.
- Keep the monitor clean by wiping the cabinet or protective panel with a soft cloth. If there is an excessive amount of dirt, use a diluted neutral cleanser, then wipe clean with a dry cloth.
- This monitor has a built-in intake fan. Extended use causes dirt to accumulate on the fan, so wipe it clean periodically.

### SCREEN BURN

- Try to avoid displaying still images or extremely bright images on the screen for an extended period of time. If left on screen for too long the image will be permanently etched onto the CRT - a phenomenon known as "screen burn". Screen burn is not a problem when displaying moving pictures during video playback.

## POWER CONNECTION (Only for United Kingdom-type power cord)

The plug on the United Kingdom-type power cord has a built-in fuse.

### WARNING

**Do not cut off the main plug from this equipment.** If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the main supply.

If a new main plug has to be fitted, then follow the instruction given below:

### WARNING:

THIS APPARATUS MUST BE EARTHED.

### IMPORTANT.

The wires in the mains lead on this product are coloured in accordance with the following cord:

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As these colours may not correspond with the coloured making identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal which is marked with the letter E or the safety earth symbol  $\oplus$  or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

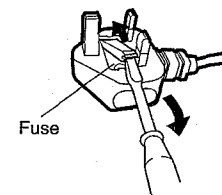
When replacing the fuse, be sure to use only a correctly rated approved type, re-fit the fuse cover.

**IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.**

### How To Replace The Fuse

Open the fuse compartment with the blade screwdriver, and replace the fuse.

(\* An example is shown in the illustration below.)

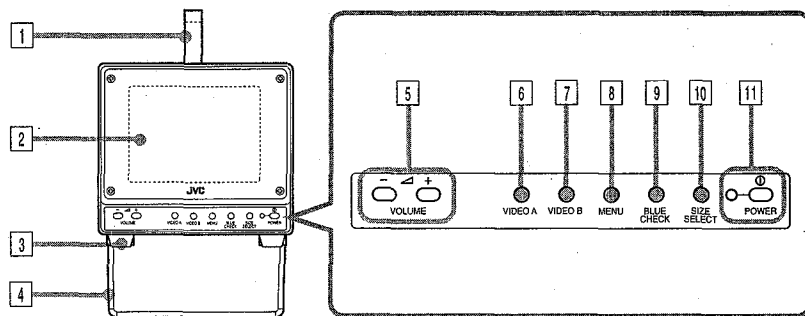


ENGLISH

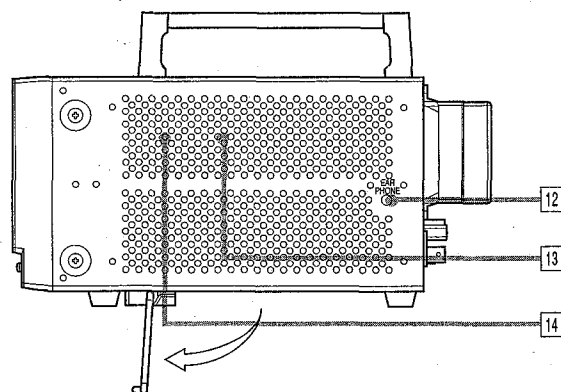
# CONTROLS AND FEATURES

## PRODUCT: FRONT & RIGHT VIEW

### FRONT VIEW



### RIGHT VIEW



### FRONT VIEW

- 1 Carrying Handle**  
Used to carry the monitor.  
Can be removed when the monitor is mounted in a rack.
- 2 Screen**  
A removable shield protecting the liquid crystal shutter is provided.
- 3 Feet**  
Can be removed when the monitor is mounted in a rack.
- 4 Stand**  
To use the stand, pull it out to about 94°. The monitor will be tilted about 18°.  
Can be removed when the monitor is mounted in a rack.  
\* DO NOT push down on the monitor from above or place heavy objects on it when the stand is pulled out.
- 5 VOLUME +/- Buttons**  
Usually used as VOLUME +/- buttons to adjust the volume.  
- : Decreases the volume  
+ : Increases the volume  
\* While MENU is displayed, used to adjust (set) MENU items.
- 6 VIDEO A Button**  
Press this button to select the video signal input to the VIDEO A terminal and the audio signal input to the AUDIO IN A terminal.  
The button lights in green when VIDEO A is selected.
- 7 VIDEO B Button**  
Press this button to select the video signal input to the VIDEO B terminal and the audio signal input to the AUDIO IN B terminal.  
The button lights in green when VIDEO B is selected.
- 8 MENU Button**  
Press this button to access the menu for performing settings and adjustments on the monitor.  
The selected item displayed on the menu changes each time this button is pressed.
- 9 BLUE CHECK Button**  
Press this button to use the blue check function.  
The blue check function helps make the CHROMA and PHASE settings more accurate.

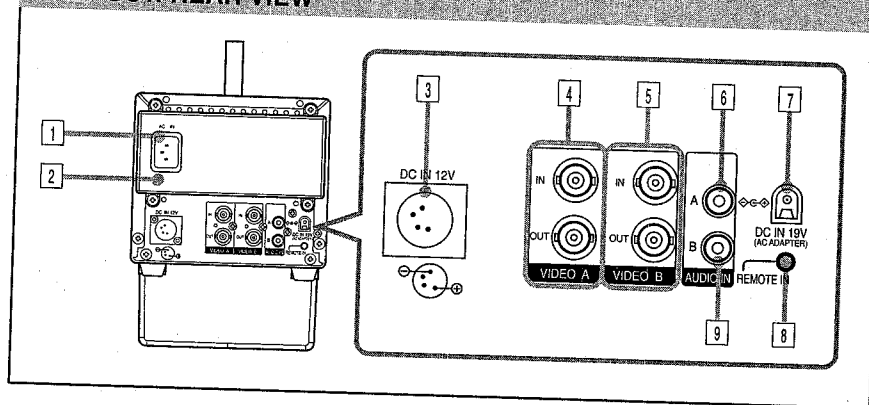
- 10 SIZE SELECT Button**  
Press this button to change the screen size. The screen size changes each time this button is pressed.
- 11 POWER Switch/Indicator**  
Press this switch to turn the power ON or OFF. The POWER indicator lights in green when the power is ON.

### RIGHT VIEW

- 12 Earphone Terminal**  
Stereo minijack output terminal.  
(Actual output is monaural.)
- 13 Built-in Speaker**  
A built-in speaker is located in the right panel when the monitor is viewed from the front.  
(When earphones are connected to the earphone terminal, no sound is output from the speaker.)
- 14 Intake Fan**  
DO NOT cover the intake fan or ventilation slot as this could cause the monitor to overheat, resulting in a fire or malfunction.

ENGLISH

**PRODUCT: REAR VIEW**



**Power input terminal.**  
Connect the provided power cord to the terminal.

Can be removed when a commercial DC power supply (DC 12 V) is used.

Connect a commercial DC power supply.  
(Consult your dealer for usable DC power supplies.)

BNC video signal input (IN) and output (OUT) terminals. The output terminal is bridge-connected (auto termination).

**IN** : Connect to the composite video signal output terminal of a video camera, etc.

**OUT :** Connect to the composite video signal input terminal of a VCR, etc.

BNC video signal input (IN) and output (OUT) terminals. The output terminal is bridge-connected (auto termination).

**IN :** Connect to the composite video signal output terminal of a video camera, etc.

**OUT:** Connect to the composite video signal input terminal of a VCR, etc.

RCA-pin monaural audio signal input terminal.  
Connect it to the audio signal output terminal of  
the video camera, etc. connected to the VIDEO  
A input (IN) terminal.

Connect the provided AC adapter to this terminal.

\* DO NOT use any AC adapter other than the one provided.


Mini-jack input terminal.  
A wired remote control can be connected to this terminal.  
(Consult your dealer for details.)

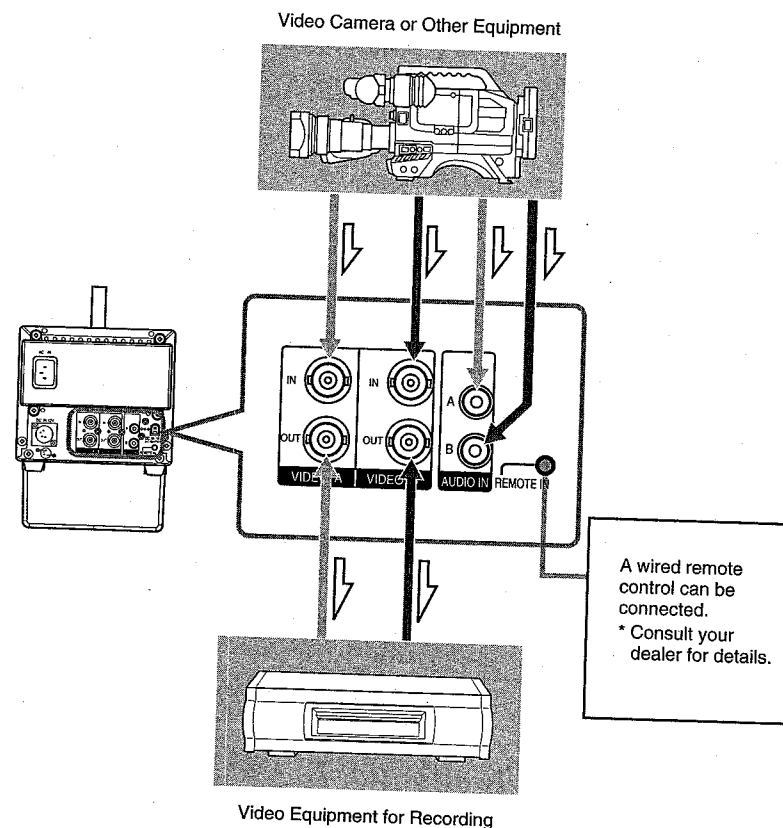
RCA-pin monaural audio signal input terminal.  
Connect it to the audio signal output terminal of  
the video camera, etc. connected to the VIDEO  
3 input (IN) terminal.

- Before connecting your system, make sure that all units are turned off.
- If you are not connecting any equipment to one of the bridged video output (VIDEO OUT) terminals, be sure NOT to connect any cables to the terminal as this will cause the terminating resistance switch to open (auto terminate function).
- DO NOT connect a piece of equipment to the same pair of video input (VIDEO IN) and video output (VIDEO OUT) terminals.
- Also refer to the instructions of the equipment being connected.

➡ : VIDEO A Connection Example

➡ : VIDEO B Connection Example

 : Signal Flow



# PREPARING THE POWER SUPPLY

## Precautions

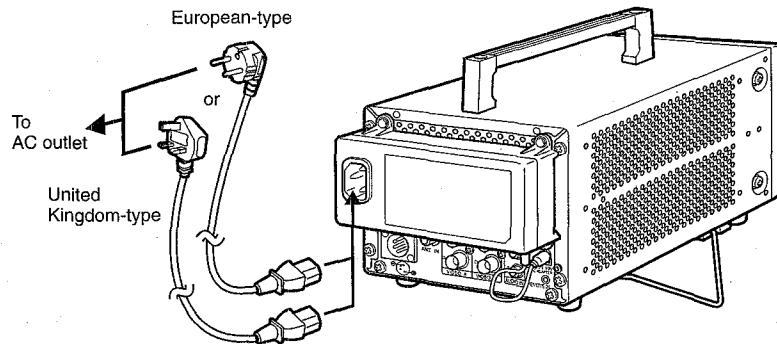
Use one of the following power supplies:

- AC power supply (100 V AC – 240 V AC, 50 Hz/60 Hz): Use the provided power cord.  
\* This monitor includes two power cords: one with a United Kingdom-type plug and the other with a European-type plug. Be sure to use the proper power cord for the AC outlet in your country. If neither can be used, please contact your dealer or qualified service personnel for the correct power cord.
- DC power supply (12 V DC): Use any brand of external DC battery pack (commercial) or other DC power supply.

## INDOOR USAGE (AC Power Supply)

Connect the provided power cord to the AC IN (AC power input) terminal and an AC outlet.

- When AC power supply is used, the power from the DC IN 12 V (DC power input) terminal is automatically cut off.



### Note:

- DO NOT use any AC adapter other than the one provided, otherwise it may cause a malfunction.

## OUTDOOR USAGE (DC Power Supply)

Connect any commercial brand of external DC battery pack or other DC power supply to DC IN 12 V (DC power input) terminal with the exclusive power cord.

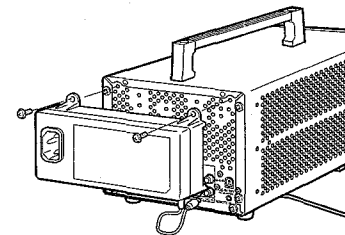
### Connection example: using an external DC battery pack

Before performing the following, be sure to unplug the power cord.

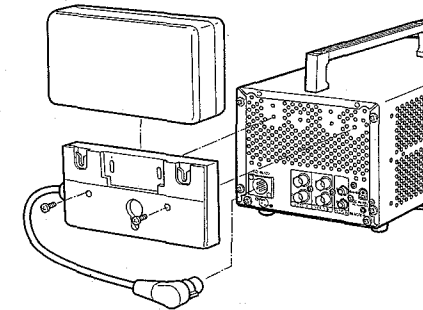
The DC battery pack fits into the attachment holes on the back of the monitor.

- The screw holes for fixing the DC battery are M4 size and have a depth of 12 mm. The fixing screws must be less than 12 mm long.

### 1 Remove the AC Adapter.



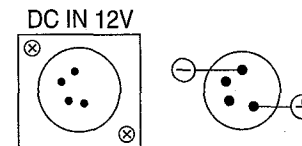
### 2 Attach the DC Battery Pack.



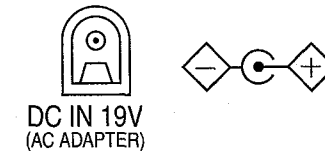
### Notes:

- Do not leave the monitor connected to a battery via the DC IN 12 V (DC power input) terminal for long periods when the monitor is not in use.  
A slight electrical current is passed to the battery protection circuit even when the power is turned off, which consumes battery power.
- Consult your dealer for usable DC 12 V power supplies.
- Bauer, PAG or other commercial brand of external DC battery pack can be used.
- Consult your dealer for details.

### ■ Electrical Polarity of DC IN 12 V (DC Power Input) Terminal

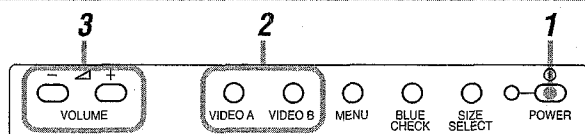


### ■ Electrical Polarity of DC IN 19 V (Exclusively for AC Adapter Input) Terminal



# BASIC OPERATIONS

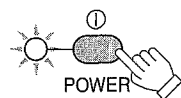
## MONITORING THE PICTURE



Front operation panel

### Precautions

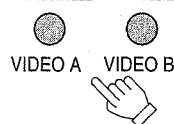
- Connect video components properly to the connection terminals on the rear of the monitor. (See pages 6 and 7)



### 1 Press the power button to turn the power ON.

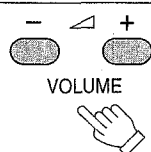
The power indicator lights in green.

- To turn the power OFF, press the power button again.



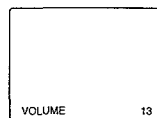
### 2 Select a video input with the VIDEO A or VIDEO B button.

The button pressed lights in green.



### 3 Adjust the volume with the VOLUME +/- buttons.

Screen indication



### POWER Indicator

The status of the POWER indicator varies depending on the following conditions:

Unlit	Power OFF
Lights in green	Power ON, usual operation
Lights in orange *1	Low voltage from DC power supply (battery, etc.)
Lights in red *1	Battery protection circuit active
Blinks in green	Power save function active

\*1: The colour of the POWER indicator does not show the exact status of the battery. Depending on the battery type, the power may be cut off even before the POWER indicator lights in orange/red. This is due to characteristics of the battery or the operation of the battery protection circuit, and is not a malfunction. If this occurs, recharge the battery.

### Screen Indication

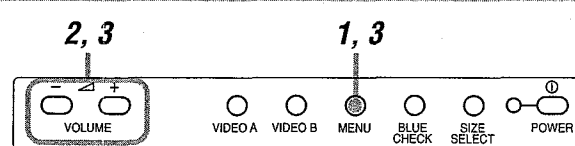
The screen indication disappears about 8 seconds after button operation.

### Unsuitable Environments for Viewing

- Watching the monitor in a room that is too dark can damage your eyes. Keep the room properly lit. Watching the monitor for long periods can also damage your eyes. Be sure to take occasional breaks.
- The picture may appear distorted depending on the environment around the monitor. If it does, DO NOT use the monitor as it could damage your eyes.

# SETTINGS AND ADJUSTMENTS

## BASIC MENU OPERATION

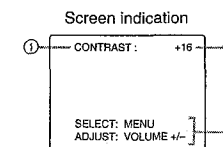


Front operation panel



### 1 Press the MENU button to select the desired item to adjust (set).

The selected item changes each time the MENU button is pressed. The currently selected item is displayed on the monitor.

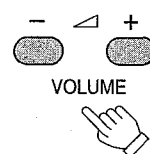


### Screen Indications

- ① Item
- ② Adjusting (setting) value
- ③ Help indication

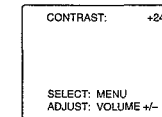
→ CONTRAST → BRIGHTNESS → SHARPNESS → CHROMA → PHASE → COLOR SYSTEM → POWER SAVE → COLOR SW → .....

\* Some items may not be displayed depending on which input mode is selected. Items that are not displayed cannot be adjusted (set).



### 2 Adjust (set) the item selected in procedure 1 with the VOLUME +/- buttons.

\* When adjusting, the help indicator disappears. It is displayed again 2 seconds after adjustment is complete.



Ex. Adjusting CONTRAST

### 3 Repeat procedures 1 and 2 to adjust (set) more items.

\* Refer to MENU CONTENTS on the next page for the name of each item.

ENGLISH

TM-L500PN



# SETTINGS AND ADJUSTMENTS (cont'd)

## MENU CONTENTS

You can adjust (set) the following items on the menu screen. Each adjusted (set) value is automatically memorised.

The values inside [ ] are the factory presets.

### 1 CONTRAST (Picture Contrast)

Adjusts the picture contrast. Decreasing the value lowers the contrast, and increasing the value raises it.

Adjustable range: -30 to +30

[0]

### 2 BRIGHTNESS (Picture Brightness)

Adjusts the picture brightness. Decreasing the value makes the picture darker, and increasing the value makes it brighter.

Adjustable range: -30 to +30

[0]

### 3 SHARPNESS (Picture Sharpness)

Adjusts the picture sharpness. Decreasing the value makes the picture softer, and increasing the value makes it more sharp.

Adjustable range: -30 to +30

[0]

### 4 CHROMA (Picture Chroma)

Adjusts the picture chroma. Decreasing the value makes the picture lighter, and increasing the value makes it deeper.

Adjustable range: -30 to +30

[0]

### 5 PHASE (Picture Phase)

Adjusts the picture phase. Decreasing the value makes the picture more reddish, and increasing the value makes it more greenish.

Adjustable range: -30 to +30

[0]

\* PHASE can be adjusted only with NTSC video signals.

\* PHASE is not displayed when PAL is selected.

### 6 COLOR SYSTEM (Colour System)

Displays the colour system (NTSC or PAL) used by the video equipment.

### 7 POWER SAVE (Power Save)

With the power save function set to ON (active), the monitor automatically enters standby mode when no video signal is input. When the power save function is active, the POWER indicator blinks in green. When a video signal is input, the power save function becomes inactive and the monitor is restored to normal operation.

Pressing any buttons on the front operation panel also sets the power save function to inactive.

[OFF]

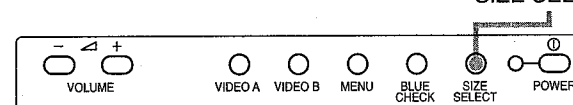
\* The power save function becomes active when no video signal is input for over 30 seconds.

### 8 COLOR SW

Turns the picture into black and white for checking the white balance.

[ON]

## SIZE SELECT



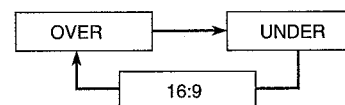
## SCREEN SIZE ADJUSTMENTS

Adjust the screen size to get the desired picture.



**Press the SIZE SELECT button.**

The screen size changes in the following order each time the SIZE SELECT button is pressed.



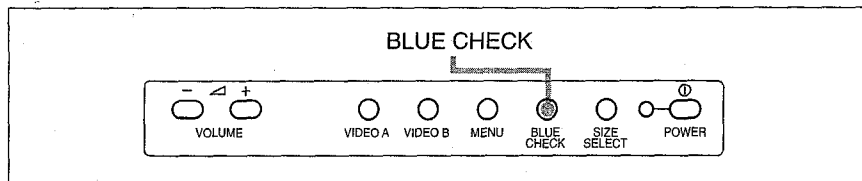
OVER	suitable for monitoring a picture with a normal aspect ratio of 4:3
UNDER	can monitor an entire picture with a normal aspect ratio of 4:3 by reducing its size
16:9	suitable for monitoring a picture with an aspect ratio of 16:9

**When using the screen mode adjustment function:**

- This monitor has a screen mode adjustment (SIZE SELECT) function. When a screen mode is selected that does not match the aspect ratio of the TV program or other video source you want to watch, the picture may appear different from the original.
- If you place this monitor in a public space (e.g. coffee shop, hotel lobby, etc.) for commercial purposes or for public exhibition, and if you use a screen mode adjustment (SIZE SELECT) function on the video image, it may be a violation of copyright law.

ENGLISH

## SETTINGS AND ADJUSTMENTS (cont'd)



### BLUE CHECK FUNCTION

The blue check function cuts the red and green signal and displays only the blue signal.

The blue check function enables you to adjust CHROMA (picture chroma) or PHASE (picture phase) easily.

\* PHASE can only be adjusted with NTSC video signals.

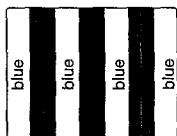


**Press the BLUE CHECK button.**

The blue check function switches ON (active) or OFF (inactive) each time the BLUE CHECK button is pressed.

**Adjusting CHROMA (picture chroma) or PHASE (picture phase) with the blue check function:**

- 1 Input a standard colour bar (NTSC or PAL) signal to the VIDEO A IN or VIDEO B IN terminal at the rear of the monitor.
- 2 Press the VIDEO A or VIDEO B button to display the standard colour bars.
- 3 Press the BLUE CHECK button to turn the blue check function ON (active).



- 4 Adjust CHROMA (picture chroma) or PHASE (picture phase).

**When an NTSC colour bar signal is input:**

- ① Adjust CHROMA (picture chroma) so that the blue bars on the left and right side of the screen have the same brightness.
- ② Adjust PHASE so that the two blue bars at the centre of the screen have the same brightness.
- ③ Repeat procedure 1 and 2 so that all four blue bars on the screen have the same brightness.

**When a PAL colour bar signal is input:**

Adjust CHROMA (picture chroma) so that the blue bars on the left and right side of the screen have the same brightness.

\* Refer to BASIC MENU OPERATION on page 11 for the adjustment procedure.

- 5 After adjustment is complete, press the BLUE CHECK button again to turn the blue check function OFF (inactive).

## TROUBLESHOOTING

Before requesting repair, check the following points.

Problems	Points to be checked	Measures (remedy)
No power supply.	Is the power plug loosened or disconnected?	Firmly insert the power plug.
	Is the battery charged properly? (when a DC power supply is used)	Charge the battery or replace the charged battery (refer to the battery charger you are using).
No picture with the power on.	Is the signal output from the connected equipment?	Set the connected equipment correctly.
	Is the input signal selected correctly?	Select the correct input.
	Is the video signal cable disconnected?	Connect the video signal cable firmly.
No sound.	Is the audio signal output from the connected equipment?	Set the connected equipment correctly.
	Is the volume set to minimum?	Adjust the volume properly.
	Is the audio signal cable disconnected?	Connect the audio signal cable firmly.
Picture is shaking.	Is the monitor close to a motor, transformer or other device generating a strong magnetic field?	Move the monitor away from the device until the picture stops shaking.
No colours, wrong colours, or dark picture.	Has COLOR SW been set to OFF?	Set COLOR SW to ON in the menu.
	Has the picture control setting (CONTRAST, BRIGHTNESS, CHROMA or PHASE) been changed?	Adjust each setting to the standard value [0].
Some parts of the picture are distorted.	Is the monitor close to a speaker or magnet? Did you move a speaker or magnet close to the monitor?	Keep speakers and magnets away from the monitor.
There are black parts on the top and bottom of the screen, and both horizontal sides of the picture is indented.	Is the screen size set to 16:9?	Set the screen size to OVER or UNDER.

(continued on the next page)

ENGLISH

## TROUBLESHOOTING (cont'd)

Problems	Points to be checked	Measures (remedy)
The screen size is small.	Is the screen size set to UNDER?	Set the screen size to OVER.

### The following are not malfunctions:

- The monitor emits a strange sound when the room temperature changes suddenly. This is only a problem if an abnormality appears on the screen as well.
- If two or more monitors are operated next to each other, their images may shake or be distorted. This phenomenon is due to mutual interference; it is not a malfunction. Move the monitors away from each other until the interference disappears or turn the power off on any monitor that is not being used.
- If a magnet or speaker is placed close to the monitor, the picture may shake. This is caused by the magnetic effect and is not a malfunction.
- When the monitor is turned ON, the sound of a running motor may be heard. This is the cooling fan and is not a malfunction.
- When playing back a video tape, the upper edge of the picture may be distorted. This is caused by skew distortion and is not a malfunction.
- Vertical stripes may occur on a dark picture. This is caused by quantisation noise (noise which occurs when a picture is digitised) and is not a malfunction.

## CHARACTERISTICS OF LCCS VIDEO MONITOR SYSTEM

### ■ PRINCIPLE BEHIND LCCS VIDEO MONITOR OPERATION

The LCCS Video Monitor is a combination of a black-and-white cathode-ray tube and liquid crystal colour shutter (LCCS), which are used together to reproduce colour images.

The video signal input to the monitor is demodulated into RGB primary colour signals which are then stored in the field memory. Signals in the field memory are read three times faster than the input video signal is, and are displayed on the black-and-white cathode-ray tube in the order of R, G and B. (Three images are displayed during one field.)

Colour filters on the liquid crystal colour shutter change according to the displayed primary colour signal, transforming the black-and-white images into R, G and B primary colour images.

Because of the phenomenon known as persistence of vision, the R, G and B primary colour images appear as a single colour image to the human eye.

### ■ FEATURES OF LCCS VIDEO MONITOR

#### • High Contrast

Thanks to its low permeability, the liquid crystal colour shutter (LCCS) does not reflect outside light as much, enabling it to reproduce high-contrast images even in direct sunlight.

#### • High Resolution

The use of a black-and-white cathode-ray tube (which has no picture elements) and a liquid crystal colour shutter (LCCS) allows it to display images at high resolution.

#### • No Magnetic Interference

Unlike with colour cathode-ray tubes, irregular colour does not occur on the display because the monitor does not have any colour elements.

#### • No Moire Patterns

Moire patterns (interference fringes) do not occur because the monitor does not have any colour elements.

### ■ THE FOLLOWING ARE NOT MALFUNCTIONS:

- Picture hue changes depending on the angle from which the monitor is viewed.  
This is due to normal characteristics of the liquid crystal colour shutter.
- Two horizontal stripes are displayed on the upper and lower side of the picture.  
This is due to the structure of the liquid crystal colour shutter.
- Simple colour image is displayed for an instant.  
This is due to normal characteristics of the LCCS video monitor.
- Patterns such as spots are displayed when the monitor is turned ON or OFF.  
This is due to normal characteristics of the liquid crystal colour shutter.
- The colour of characters or images seem to be shifted.  
This is due to normal characteristic of the LCCS video monitor.  
When images combined with a Macrovision copy protection signal or jittery images from a VCR, etc. are displayed on the monitor, their colour may appear to be shifted.

# SPECIFICATIONS

Type	: LCCS video monitor
Colour System	: NTSC/PAL
Picture Tube	: 12.7 cm measured diagonally, black and white
Effective Screen Size	: Width : 94.2 mm Height : 70.7 mm Diagonal : 114.3 mm
Video Inputs	: 2 line inputs, composite video, BNC connector x 4, 1 V(p-p), 75 $\Omega$ Bridge connection possible, 75 $\Omega$ auto termination
Audio Inputs	: 2 line inputs, monaural, RCA-pin connector x 2, 0.5 V (rms), high-impedance
REMOTE IN Input	: 1 line input, minijack connector
Built-in Speaker	: 5 cm round x 1, 0.2 W output
Environmental Conditions	: Operating temperature: 0°C - 40°C Operating humidity: 20% - 80% (non-condensing)
Power Requirements	: 100 V AC - 240 V AC 50 Hz/ 60 Hz or 12 V DC
Power Consumption	: 2 A (DC 19 V) (using an AC adapter) 3.5 A (DC 12 V) (using a battery)
Weight	: 3.3 kg (including AC adapter) 3.0 kg (not including AC adapter)
Dimensions (W x H x D)	: 146 mm x 181.3 mm x 291.8 mm *Including AC adapter, carrying handle, feet and stand (stored) (power cord not included)
Provided Accessories	: AC power cord [United Kingdom-type (1.8 m)] x 1 AC power cord [European-type (1.8 m)] x 1 AC adapter [attached to monitor] x 1

## Notes about Magnets

- DO NOT place the following close to the monitor: magnets, speakers, electric clocks, devices or toys which use a magnet, medical devices which use a magnet, or any other products which generate a magnetic field. Doing so may cause the picture to be distorted by their magnetic effect. Also, DO NOT place the monitor close to a high-voltage power line or transformer.
- If an external speaker is placed close to the monitor, the picture may be distorted. In this case, use a shielded speaker.

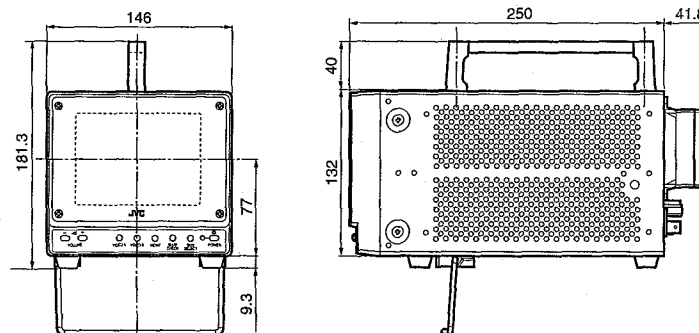
\* Dimensions and weight are approximate.

\* E. & O.E. Design and specifications are subject to change without notice.

\* Illustrations used in this manual have been exaggerated, abbreviated or compounded for explanatory purposes only. The appearance of the actual product may differ slightly.

## ■ Dimensions

Unit : mm



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